

Check-list of the vascular plants collected during Iter Mediterraneum II

Avinoam Danin

Introduction

The following is a complete list of the specimens collected during Iter Mediterraneum II in Israel, arranged alphabetically by names of taxa. For each taxon the correct name and publication reference is given, together with synonyms (mostly those that were used in previous publications concerning the flora of the area) in square brackets. Med-Checklist nomenclature has been followed in most cases. Notulae on special cases are included in the text. *Euphorbia chamaepeplus* var. *angustifolia* and *Phillyrea latifolia* subsp. *daninii* are described as new. *Sedum litoreum* subsp. *praesidis* is newly combined.

The identification of the vascular plants collected has been made by the members of the expedition and by several specialists, as follows:

- F. Axelrod (Jerusalem and Puerto Rico), *Picris*.
- A. Danin (Jerusalem) most of the specimens collected.
- Z. Díaz Lifante (Sevilla), *Asphodeleae*.
- F. Ehrendorfer (Vienna), *Rubiaceae*.
- W. Greuter (Berlin), *Aetheorrhiza*.
- H. t. Hart (Utrecht), *Crassulaceae*.
- D. Heller (Jerusalem), *Trifolium*.
- C. C. Heyn (Jerusalem), *Adonis*, *Calendula*, *Gagea*, *Lotus*, *Medicago*.
- F. Kollmann (Jerusalem), *Allium*.
- U. Plitmann (Jerusalem), *Cuscuta*, *Vicia*, *Lathyrus*.
- T. Raus (Berlin), *Asteriscus*, *Hedypnois*, *Ononis*, *Torilis*.
- H. Scholz (Berlin), *Gramineae*.
- B. Valdés (Sevilla), comments on species from all families.
- B. Zimmer (Berlin), *Cheilanthes*.

Check-list

Aaronsohnia factorovskyi Warburg & Eig in Bull. Inst. Agric. Nat. Hist. Tel-Aviv
6: 40 (1927)

Dead Sea Valley: near Ormat's solar ponds, 2 km N of the Dead Sea northern coast.
Salty soil in wadis, 35°30'31"E-31°48'10"N, (-)370 m. 22.03.1989, 07.005.

Abutilon fruticosum Guillemain & Perrottet in Guillemain & al., Fl. Seneg. Tent.: 70 (1831) [*A. denticulatum* (Fresen.) Webb]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.009.

Acacia raddiana Savi, Acacie Egiz.: 1 (1830)

Arava Valley: Yotvata. Disturbed ground and wadis, 35°03'30"E-29°59'10"N. 100 m. 29.03.1989, 31.002.

Acacia tortilis (Forsskål) Hayne, Getreue Darstell. Gew. 10: tab. 31 (1827)

Arava Valley: Yotvata. Disturbed ground and wadis, 35°03'30"E-29°59'10"N. 100 m. 29.03.1989, 31.003.

Acanthus syriacus Boiss., Diagn. Pl. Orient. 11: 135 (1849)

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.032.

Achillea santolina L., Sp. Pl.: 896 (1753)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.054; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.003.

Adonis dentata Delile, Descr. Egypte, Hist. Nat.: 287 (1813)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.030; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.054.

Adonis microcarpa DC., Syst. Nat. 1: 223 (1817) [*A. cupaniana* Guss.]

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.023; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m.

22.03.1989, *05.031*; **Philistean Plain**: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, *04.009*; **Judean Foothills**: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, *02.081*; **Northern Negev**: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, *15.053*.

Aegialophila pumilio (L.) Boiss., Diagn. Pl. Orient. 10: 105 (1849)

Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, *58.023*.

Aegilops geniculata Roth, Bot. Abh.: 45 (1787) [*A. ovata* L.]

Judean Mts: Givat Ram. 0.5 km E of the entrance to the University Campus. *37.002*;
Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, *54.035*.

Aegilops kotschy Boiss., Diagn. Pl. Orient. 7: 129 (1846)

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, *16.050*.

Aegilops peregrina (Hackel) Maire & Weiller in Maire, Fl. Afrique N. 3: 358 (1955)
[*A. variabilis* Eig]

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, *05.010*; **Lower Jordan Valley**: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-) 270 m. 23.03.1989, *09.037*; **Judean Desert**: 5 km SW of Jericho, near St. John's Monastery. Stony slopes, 35°27'55"E-31°50'30"N, (-)10 m. 23.03.1989, *11.002*; **Kinnrot Valley (Upper Jordan Valley)**: 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, *39.018*; **Coastal Carmel**: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, *58.028*.

Aerva javanica (Burm. fil.) Schultes in Roemer & Schultes, Syst. Veg. 5: 565 (1820)
[*A. persica* (Burm. fil.) Merr.]

Southern Negev: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, *27.010*.

Aetheorhiza bulbosa (L.) Cass. in Cuvier, Dict. Sci. Nat. 48: 426 (1827) subsp. *bulbosa* [*Crepis bulbosa* (L.) Tausch]

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.012; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.014.

When describing *Aetheorhiza bulbosa* subsp. *microcephala*, Rechinger (in Phytion (Horn) 16: 211-220. 1974) cited specimens from Greece, Turkey, Cyprus, Syria and Lebanon, whereas the widespread but more westerly subsp. *bulbosa* was said to reach Egypt and (again) Cyprus; no plants from Israel were examined by him. Meikle (Fl. Cyprus 2: 1014-1015. 1985) reports that the situation in Cyprus is complex: "While the differences between the subspecies (based chiefly on size of involucre and achenes) are evident outside Cyprus, I do not find that any satisfactory distinctions can be drawn between the individuals which form the polymorphic population of the species on the island.....; they may represent yet another subspecies". My own experience in Greece leads me to accept *A. bulbosa* subsp. *microcephala* Rech. fil. as a distinctive and little variable taxon, characterized not only by its small, narrowly cylindrical flowering heads but also by a low number of inner involucre bracts and by major leaves that are runcinate along the petiole but end in a subentire blade; so defined, it occurs throughout S Greece, the Aegean region and W Turkey, where it replaces subsp. *bulbosa*. The populations found in Cyprus and in more eastern areas are indeed very variable, but it remains to be demonstrated that they include individuals of genuine subsp. *microcephala*. The two specimens collected in Israel definitively fall within the range of variation of subsp. *bulbosa*.

W. GREUTER

Aethionema heterocarpum Trev. in Bot. Zeitung (Berlin) 5: 409 (1847)

Golan: Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.015.

Agathophora alopecuroides (Delile) Bunge in Mem. Acad. Imp. Sci. Saint Pétersburg, 4(11): 19. 1862. [*Halogeton alopecuroides* (Delile) Moq.]

Negev Highlands: Makhtesh Hathira, Nahal Hathira. Sandy-silty wadi, 35°01'00"E-30°57'03"N. 310 m. 30.03.1989, 33.006.

Ainsworthia trachycarpa Boiss., Diagn. Pl. Orient. 10: 43 (1849)

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.083; **Bet-Shean Valley:** 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.015; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.053.

Aizoon canariense L., Sp. Pl.: 488 (1753)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.067; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.061.

Aizoon hispanicum L., Sp. Pl.: 488 (1753)

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.042; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.006.

Ajuga chamaeptytis (L.) Schreber, Pl. Verticill. Unilab.: 24 (1773), subsp. *chia* (Schreber) Arcangeli, Comp. Fl. Ital.: 560 (1882) [*A. chia* Schreber]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.067; **Samaritan Desert:** near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.085; **Judean Mts:** Jerusalem. near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'E-31°45'15"N, 780 m. 24.03.1989, 12.020; **Kinnrot Valley (Upper Jordan Valley):** near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.010; **Golan:** near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.035.

Alcea acaulis (Cav.) Alef. in Österr. Bot. Z. 12: 251 (1862)

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.010.

Alcea galilaea Zohary in Bull. Res. Council Israel, Sect. D, Bot., 11: 224, f. 2 (1963)

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haön. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.031.

Alkanna strigosa Boiss. & Hohen. in Boiss., Diagn. Pl. Orient. 4: 46 (1844)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.014; **Northern Negev:** 5 km N of Beer

Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.051.

Alkanna tinctoria Tausch in Flora (Regensburg) 7: 234 (1824), subsp. *anatolica* Huber-Morath in Bauhinia 4: 206 (1971). [*A. tuberculata* (Forsskål) Meikle (non Greuter)]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.081.

The plants collected (03.081) clearly differ from those of the W. Mediterranean particularly by their smaller flowers and the canescent setose indumentum. They should be distinguished at a subspecific level as previously recognized by Huber-Morath (in Davis, Fl. Turkey 6: 425-426. 1978) and Greuter & al. (Med-Checklist 1: 68. 1984). Although neither Feinbrun-Dothan (Fl. Palaest. 3: 78. 1978), nor Greuter & al. (l.c.) reported this subspecies for Israel, the records of *A. tinctoria* Tausch and *A. tinctoria* subsp. *tinctoria* for Israel, or at least part of them, must be referred to subsp. *anatolica*. B. VALDÉS

Allium artemisietorum Eig & Feinbrun in Palestine J. Bot., Jerusalem Ser., 3: 18-19, f. 30 (1943)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.048.

Allium aschersonianum Barbey in C. Barbey & Barbey, Herb. Levant: 163, t. 4 (1882)

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.044.

Allium erdelii Zucc. in Abh. Math.-Phys. Cl. Königl. Bayer. Akad. Wiss. 3: 236, t. 5 (1843)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.057.

Allium neapolitanum Cyr., Pl. Rar. Neap. 1: 13, t. 4 (1788)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.103; Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-

31°48'10"N, 250 m. 22.03.1989, 05.015; **Samaritan Desert**: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.088; **Negev Highlands**: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.031.

Allium negevense Kollmann in Israel J. Bot. 18: 69, f. 3 (1969)

Negev Highlands: 5 km SW of Yerokham. Loessial soil and near outcrops of smooth-faced limestone, 34°53'40"E-31°58'00"N. 500 m. 27.03.1989, 23.002.

Allium orientale Boiss., Diagn. Pl. Orient. 13: 25 (1854)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.017; **Samaritan Desert**: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.093.

Allium qasyunense Mouterde in Bull. Soc. Bot. France 100: 348 (1953)

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.025.

Allium rothii Zucc. in Abh. Math.-Phys. Cl. Königl. Bayer. Akad. Wiss. 3: 236, t. 5 (1843)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.047.

Allium stamineum Boiss., Diagn. Pl. Orient., ser. 2, 4: 119 (1859)

Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.014.

Allium tel-avivense Eig, Pl. Palestina, Anal. Key: 75 (1931)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.084.

Allium trifoliatum Cyr., Pl. Rar. Neap. 2: 11, t. 3 (1792), subsp. *hirsutum* (Regel) Kollmann in Israel J. Bot. 24: 204, f. 1 (1975) [*A. hirsutum* Zucc. (non Lam.); *A. subhirsutum* auct.]

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.046; **Golan:** near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.021; **Upper Galilee:** Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.016.

Alopecurus myosuroides Hudson, Fl. Angl.: 23 (1762)

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.036.

Alopecurus utriculatus Banks & Solander in Russel, Nat. Hist. Aleppo, ed. 2, 2: 243 (1794)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.085; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.012.

Alyssum damascenum Boiss. & Gaill. in Boiss., Diagn. Pl. Orient., ser. 2, 6: 18 (1859)

Samarian Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.047; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.029.

Alyssum linifolium Willd., Sp. Pl. 3: 467 (1800)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.024; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.041.

Alyssum marginatum Boiss. in Ann. Sci. Nat., Bot., ser. 2, 17: 157 (1842)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.005.

Alyssum simplex Rudolphi in J. Bot. (Schrader) 1799 (2): 290 (1799)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.031; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.028.

Alyssum strigosum Banks & Solander in Russell, Nat. Hist. Aleppo, ed. 2, 2: 257 (1794) [*A. minus* auct.]

Philistine Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.065; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.009; **Golan:** Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.002; **Upper Galilee:** Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.004.

Amberboa crupinoides (Desf.) DC., Prodr. 6: 559 (1838)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.057.

Amberboa lippii (L.) DC., Prodr. 6: 559 (1838)

Southern Negev: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.034.

Ammochloa palaestina Boiss., Diagn. Pl. Orient. 13: 52 (1854)

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.041; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.003; **Negev Highlands:** Nahal Loz and Borot Loz (various habitats), 34°39'30"E-30°30'00"N. 960-1,000 m. 27.03.1989, 20.008; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.011; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.032.

Anabasis articulata (Forsskål) Moq. in DC., Prodr. 13 (2): 212 (1849)

Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m.

29.03.1989, 26.058; **Arava Valley:** Yotvata. Disturbed ground and wadis, 35°03'30"E-29°59'10"N. 100 m. 29.03.1989, 31.012.

Anabasis setifera Moq., Chenop. Monogr. Enum.: 164 (1840)

Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.057.

Anabasis syriaca Il'in in Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk SSSR 7: 215 (1938) [*A. aphylla* auct.; *A. haussknechtii* auct.]

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.063.

Anagallis arvensis L., Sp. Pl.: 148 (1753), var. *caerulea* (L.) Gouan, Fl. Monsp.: 30 (1764)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.014; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.031; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.035.

Anagyris foetida L., Sp. Pl.: 374 (1753)

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.028.

Anastatica hierochuntica L., Sp. Pl.: 641 (1753)

Southern Negev: Near Kibbutz Shizafon. Wadis in gravel plain, 35°02'05"E-30°03'00"N. 430 m. 29.03.1989, 29.001.

Anchusa aegyptiaca (L.) DC., Prodr. 10: 48 (1846)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.066; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.063; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a

Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, *14.017*; Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, *17.001*; Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, *40.005*.

Anchusa italica Retz., *Observ. Bot.* 1: 12 (1779)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, *02.058*; Mt. Hermon: near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, *51.003*.

Anchusa milleri Sprengel, *Nachtr. Bot. Gart. Univ. Halle*: 10 (1801)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, *06.025*; Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, *26.024*.

Anchusa strigosa Banks & Solander in Russell, *Nat. Hist. Aleppo* ed. 2, 2: 246 (1794)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, *03.083*.

Anchusa undulata L., *Sp. Pl.*: 133 (1753), subsp. *hybrida* (Ten.) Coutinho, *Fl. Portugal*: 495 (1913).

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, *13.043*; Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, *44.026*.

Anchusa undulata L. is a rather polymorphic species which occurs throughout the Mediterranean region. The plants from the Iberian Peninsula belong to three different subspecies (Valdés in *Lagascalia* 10: 104-110. 1981) which share with those of Morocco the same basic characters, mainly their stamens inserted at the top of the corolla tube and more or less overlapping the scales. The plants from Israel (*13.043*, *44.026*) have stamens inserted at about the middle of the corolla tube and must not be considered as mere by synonymous with *A. undulata* in the strict sense as Feinbrun-Dothan (*Fl. Palaest.* 3: 82-83. 1978) does. They must be separated as subsp. *hybrida*. (Chater in Tutin & al., *Fl. Eur.*

3: 107. 1972, Chamberlain in Davis, Fl. Turkey 6: 392-393. 1978) rather than as a distinct species (Greuter & al., Med-Checklist 2: 72. 1984). B. VALDÉS

Andrachne aspera Sprengel, Syst. Veg. 3: 884 (1826)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.050.

Andrachne telephioides L., Sp. Pl.: 1014 (1753)

Judean Mts: Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.007; Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.032.

Androcymbium palaestinum Baker in J. Linn. Soc., Bot., 17: 445 (1879)
[*Erythrostickus palaestinus* (Baker) Boiss.]

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.038.

Andropogon distachyos L., Sp. Pl.: 1046 (1753)

Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.057; Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.014.

Anemone coronaria L., Sp. Pl.: 539 (1753)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.080; Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.047; Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.059.

Anogramma leptophylla (L.) Link, Fil. Sp.: 137 (1841) [*Gymnogramma leptophylla* (L.) Desf.]

Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.007.

Anthemis bornmuelleri Stoj. & Aht. in Notizbl. Bot. Gart. Berlin-Dahlem 13: 522 (1937) [*A. galilaea* Eig]

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.038.

Anthemis hyalina DC., Prodr. 6: 4 (1838)

Mt. Hermon: lower teliferique. Slopes of hard karstic Jurassic limestones, 35°46'20"E-33°17'30"N. 1690 m. 4.4.89, 49.005.

Anthemis leucanthemifolia Boiss. & Blanche in Boiss., Diagn. Pl. Orient., ser. 2, 3: 20 (1856)

Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.008.

Anthemis melampodina Delile, Descr. Egypte, Hist. Nat.: 268 (1813-1814)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.054.

Anthemis palestina Boiss., Fl. Orient. 3: 283 (1875) [*A. melanolepis* Boiss.]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.002; Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.011; Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.002.

Anthemis pseudocotula Boiss., Diagn. Pl. Orient. 6: 86 (1846)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.003; Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.021; Negev Highlands: 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.041.

Anthriscus lamprocarpus Boiss. in Ann. Sci. Nat., Bot., ser. 3, 2: 59 (1844)

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.012.

Antirrhinum orontium L., Sp. Pl.: 617 (1753) [*Misopates orontium* L.]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.034; Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.046; Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.037; Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.015.

Anvillea garcinii (Burm. fil.) DC., Prodr. 5: 487 (1836)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.063; Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.041.

Aphanes arvensis L., Sp. Pl.: 123 (1753) [*Alchemilla arvensis* L.]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.025.

Arabis aucheri Boiss. in Ann. Sci. Nat., Bot., ser. 2,17: 52 (1842)

Mt. Hermon: lower teliferique. Slopes of hard karstic Jurassic limestones, 35°46'20"E-33°17'30"N. 1690 m. 4.4.89, 49.008.

Arabis cf. *aucheri* Boiss.

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.034.

Arabis auriculata Lam., Encycl. 1: 219 (1783) [*A. nova* Vill.]

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.026; Golan: Odem Forest, near Masaáda. Shallow soil on basalt,

35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.014; **Mt. Hermon**: lower teliferique. Slopes of hard karstic Jurassic limestones, 35°46'20"E-33°17'30"N. 1690 m. 4.4.89, 49.015.

Arbutus andrachne L., Syst. Nat., ed. 10: 1024 (1759)

Mt. Carmel: Upper Nahal Neshet, 2 km S of Neshet. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.004.

Arenaria leptoclados (Reichenb.) Guss., Fl. Sicul. Syn. 2: 824 (1845)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.033; **Philistean Plain**: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydorthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.028; **Kinnrot Valley (Upper Jordan Valley)**: 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.015.

Argyrolobium uniflorum (Decaisne) Jaub. & Spach in Ann. Sci. Nat., Bot., ser. 2, 19: 45 (1843)

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.035; **Kinnrot Valley (Upper Jordan Valley)**: 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.013.

Arisarum vulgare Targ.-Tozz. in Ann. Mus. Imp. Fis. Firenze 2(2): 67 (1810)

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.006.

Aristida coerulescens Desf., Fl. Atlant. 1: 109, t.21 f.2 (1798)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydorthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.045; **Lower Jordan Valley**: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.045; **Kinnrot Valley (Upper Jordan Valley)**: 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.023; **Kinnrot Valley (Upper Jordan Valley)**: near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.038.

Aristolochia parvifolia Sm., Fl. Gracc. Prodr. 2: 222 (1816)

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.009; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.046.

Arnebia decumbens (Vent.) Cosson & Kralik in Bull. Soc. Bot. France 4: 402 (1857)

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.050; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.043; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.025; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.023; **Negev Highlands:** Makhtesh Hathira, Nahal Hathira. Sandy-silty wadi, 35°01'00"E-30°57'03"N. 310 m. 30.03.1989, 33.005.

Arnebia linearifolia DC., Prodr. 10: 95 (1846)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.058; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.030; **Southern Negev:** 6 km S of Zihor junction. chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.010; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium. pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.023.

Arnebia tinctoria Forsskål, Fl. Aegypt.-Arab.: 63 (1775) [*A. tetrastigma* Forsskål]

Southern Negev: 6 km S of Zihor junction. chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.013.

Arrhenatherum palaestinum Boiss., Diagn. Pl. Orient. 13: 51 (1854)

Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.005.

Artedia squamata L., Sp. Pl.: 242 (1753)

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.051.

Artemisia judaica L., Mant. Pl.: 281 (1771)

Southern Negev: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.003.

Arum dioscoridis Sm., Fl. Graec. Prodr. 2: 245 (1816)

Mt. Hermon: near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.015.

Arum hygrophilum Boiss., Diagn. Pl. Orient. 13: 8 (1854)

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.034.

Arum palaestinum Boiss., Diagn. Pl. Orient. 13: 6 (1854)

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00", 770 m. 24.03.1989, 13.009; **Golan:** Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.003; **Mt. Hermon:** near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.016.

Asparagus horridus L., Syst. Veg. ed. 13: 274 (1774) [*A. stipularis* Forsskål]

Negev Highlands: Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"N. 330 m. 30.03.1989, 34.019; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.019.

Many authors, including Dinsmore (in Post, Fl. Syria, ed. 2: 662. 1933), Valdés (Lagasalia 9: 72. 1979), and Feinbrun-Dothan (Fl. Palaest. 4: 101. 1986) have used the name *A. stipularis* Forsskål for a Mediterranean species of *Asparagus* with patent, strongly spiny cladodes solitary or in fascicles of 2-3. However, Lopez (Anales Jard. Bot. Madrid 42: 324. 1986) found that Linnaeus in 1774 had already named this plant *A. horridus* and this is the correct name for this species, which has been used, amongst others, by Valdés (Fl. Andalucia Occid. 3: 640. 1987) and Valdés & Talavera (Boccone 1: 66. 1991).

B. VALDÉS

Asperugo procumbens L., Sp. Pl.: 138 (1753)

Lower Jordan Valley: 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.017;

Judean Mts: Jerusalem. near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'E-31°45'15"N, 780 m. 24.03.1989, 12.034; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.014.

Asperula arvensis L., Sp. Pl.: 103 (1753)

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.043.

Asphodeline lutea (L.) Reichenb., Fl. Germ. Excurs.: 116 (1830)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.036.

Asphodelus fistulosus L., Sp. Pl.: 309 (1753)

Negev Highlands: Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.017.

Asphodelus ramosus L., Sp. Pl.: 310 (1753) [*A. aestivus* auct.; *A. microcarpus* Salzm. & Viv.]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.098; **Philistean Plain:** 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydothymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.024; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.048; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.086; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.033; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.002; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.017; 15.037; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.021; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.032; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.022; **Negev Highlands:** Above En Avdat. Hard Eocene chalk,

34°45'20"E-30°49'30"N. 500 m. 27.03.1989, 25.002; Negev Highlands: Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"N 330 m. 30.03.1989, 34.008; Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.078.

Dinsmore (in Post, Fl. Syria, ed. 2, 2: 655. 1933), Matthews (in Davis, Fl. Turkey 8: 85-86. 1984), and Feinbrun-Dothan (Fl. Palaest. 4: 21. 1986) erroneously considered *A. aestivus* Brot. as the perennial rhizomatose, flat leaved species of *Asphodelus* from the E. Mediterranean, which was recorded by Muschler (Man. Fl. Egypt 1: 22. 1912), Bouloumoy (Fl. Liban Syrie, 336: 1930), Eig & al. (Anal. Fl. Palestine: 356. 1948) and Taeckholm & Drar (Fl. Egypt 3: 41. 1954) as *A. microcarpus* Viv. *A. aestivus* Brot. is a species endemic to the Iberian Peninsula, which clearly differs from *A. ramosus* L. by several characters. The former exhibits a long and oblique or horizontal rhizome, covered by abundant fibres from the old leaves. The latter has a short and vertical or oblique rhizome without fibres. *A. aestivus* has a taller and more branched scape, and the capsules and seeds are smaller than those of *A. ramosus*. *A. aestivus* has to be excluded from the flora of Israel.

Z. DÍAZ LIFANTE & B. VALDÉS

Asphodelus tenuifolius Cav. in Anales Ci. Nat. 3: 46, t. 27 (1801)

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.020; Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.046, 03.070; Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.047; Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.061; Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.050; Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.035; Southern Negev: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.023; Negev Highlands: Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"N. 330 m. 30.03.1989, 34.011; Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.059.

Asplenium ceterach L., Sp. Pl.: 1080 (1753) [*Ceterach officinarum* Willd.]

Judean Mts: Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.025; Mt. Hermon: lower teliferique. Slopes of hard karstic Jurassic limestones, 35°46'20"E-33°17'30"N. 1690 m. 4.4.89, 49.009.

Asteriscus aquaticus (L.) Less., Syn. Gen. Compos.: 210 (1832)

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.011; **Coastal Galilee:** coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.021.

Asteriscus graveolens (Forsskål) Less., Syn. Gen. Compos.: 210 (1832)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.038; **Dead Sea Valley:** near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.052; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.042.

Asteriscus hierochunticus (Michon) Wiklund in Nord. J. Bot. 5: 307 (1985) [*A. pygmaeus* (DC.) Cosson & Durieu]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.043; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.048; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.049.

Asteriscus spinosus (L.) Schultz Bip. in Webb & Berth, Hist. Nat. Iles Canar., 3 (2): 231 (1846), subsp. *asteroideus* (Viv.) Aurich & Podl. in Mitt. Bot. Staatssamml. München 28: 268 (1989) [*Pallenis spinosa* auct.]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (Calcareous sandstone). *Coridothymetum capitati*, 34°34'34"E-31°34'20"N, 70 m, 21.03.1989, 03.002.

For inclusion of *Pallenis* Cass. in *Asteriscus* Miller see Wicklund (in Nord. J. Bot. 5: 304. 1985).

Asterolinon linum-stellatum (L.) Duby in DC., Prodr. 8: 68 (1844)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.015; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.001.

Astoma seselifolium DC., Coll. Mém. 5: 71, t. 17 (1829)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.056; **Samaritan Desert:** near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.080.

Astracantha deinacantha (Boiss.) Podl. in Mitt. Bot. Staatssamml. München 19: 9 (1983) [*Astragalus deinacanthus* Boiss.]

Golan: Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.012.

Astragalus amalecitanus Boiss., Diagn. Pl. Orient. 9: 46 (1849)

Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.051; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.064.

Astragalus annularis Forsskål, Fl. Aegypt.-Arab.: 139 (1775)

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.032; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.032; **Negev Highlands:** Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"N. 330 m. 30.03.1989, 34.006.

Astragalus asterias Steven in Bull. Soc. Imp. Naturalistes Moscou 4: 267 (1832) [*A. cruciatus* Link]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.047; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.029; **Negev Highlands:** Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.021; **Mt. Hermon:** near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"E. 800 m. 4.4.89, 51.025.

Astragalus callichrous Boiss., Diagn. Pl. Orient. 9: 62 (1849)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*,

35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.088; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.032; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.070.

Astragalus caprinus L., Sp. Pl., ed. 2: 1071 (1763) [*A. alexandrinus* Boiss.; *A. beershabensis* Eig & Sam.; *A. platyraphis* Bunge]

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.030; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.028; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.021.

Astragalus dactylocarpus Boiss., Diagn. Pl. Orient. 2: 60 (1834), subsp. *acinaciferus* (Boiss.) Ott in Phanerog. Monogr. 9: 62 (1978) [*A. acinaciferus* Boiss.]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.029; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.023; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium. pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.005.

Astragalus hamosus L., Sp. Pl.: 758 (1753)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.107; **Samarian Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.012; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.033; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.021; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.039; **Golan:** Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.008.

Astragalus hispidulus DC., Astragalogia: 132 (1802)

Negev Highlands: Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.015; **Negev Highlands:** 6 km SW of Dimona.

Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.027; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.010.

Astragalus kahiricus DC., Prodr. 2: 292 (1825)

Negev Highlands: 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.020.

Astragalus palaestinus Eig in J. Bot. 72: 124 (1934)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.085.

Astragalus peregrinus Vahl, Symb. Bot. 1: 57 (1790)

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.028; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.026.

Astragalus sanctus Boiss., Diagn. Pl. Orient. 9: 47 (1849)

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.031; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.025; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.004; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.019.

Astragalus spinosus (Forsskål) Muschler in Verh. Bot. Vereins Prov. Brandenburg 49: 98 (1907)

Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.052; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.019; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium. pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.001.

Astragalus tribuloides Delile, Descr. Egypte, Hist. Nat.: 70 (1813)

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.033; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.050; **Negev Highlands:** Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.020; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.021; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.029; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.009; **Negev Highlands:** Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"N. 330 m. 30.03.1989, 34.007.

Atractylis cancellata L., Sp. Pl.: 830 (1753)

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.057; **Dead Sea Valley:** near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.064.

Atractylis carduus (Forsskål) C. Chr. in Dansk. Bot. Ark. 4 (3): 27 (1922) [*A. flava* Desf.]

Southern Negev: 6 km S of Zihor junction. chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.014.

Atriplex dimorphostegia Kar. & Kir. in Bull. Soc. Imp. Naturalistes Moscou 15: 438 (1842)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.039; **Southern Negev:** Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.004.

Atriplex glauca L., Sp. Pl., ed. 2: 1493 (1763) [*A. palaestina* Boiss.; *A. parvifolia* Lowe; *A. stylosa* Viv.]

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.065.

Atriplex holocarpa F. Mueller, Rep. Pl. Babbage's Exped.: 19 (1859) [*Senniella spongiosa* (F. Mueller) Aellen (see Danin, in Willdenowia 12: 40. 1982)]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.001.

Atriplex leucoclada Boiss., Diagn. Pl. Orient. 12: 95 (1853)

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.054; **Southern Negev:** 6 km S of Zihor junction. chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.017.

Atriplex semibaccata R. Br., Prodr. 1: 406 (1810)

Negev Highlands: Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.011.

Atriplex suberecta I. Verd., Bothalia 6: 418 (1954) [*A. microcarpa* auct.: Danin in Willdenowia 12: 191. 1982 (non Bentham)].

Negev Highlands: Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.010.

Avena barbata Link in J. Bot. (Schrader) 1799 (2): 315 (1800)

Philistine Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydotheryctum capitati*, 34°34'34"E-31°34'20"N, 70 m. 21.03.1989, 03.078.

Avena eriantha Durieu in Rev. Bot. Recueil. Mens. 1: 360 (1845)

Judean Mts: Jerusalem Givat Ram. 0.5 km E of the entrance to the University Campus, 37.001.

Avena sterilis L., Sp. Pl., ed. 2: 118 (1762)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.088; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.099; **Samaritan Desert:** near Ma'ale Michmash.

Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.087.

Avena wiestii Steudel, Syn. Pl. Glumac. 1: 231 (1854)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.097; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.046; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.025; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.056; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.013; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.029; **Southern Negev:** Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.018.

Ballota philistaea Bornm. in Repert. Spec. Nov. Regni Veg. 17: 284 (1921)

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.042.

Ballota undulata (Fresen.) Bentham, Lab. Gen. Sp.: 595 (1834)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.051; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.028.

Bassia arabica (Boiss.) Maire & Weiler in Maire, Fl. Afrique N. 8: 54 (1962)
[*Chenolea arabica* Boiss.]

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.048.

Bassia eriophora (Schrader) Ascherson in Schweinf., Beitr. Fl. Ethiopiens 1: 187 (1867)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.065.

Bassia muricata (L.) Ascherson in Schweinf., Beitr. Fl. Aethiopiens 1: 187 (1867)

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.004; **Arava Valley:** Yotvata. Disturbed ground and wadis, 35°03'30"E-29°59'10"N. 100 m. 29.03.1989, 31.001.

Bellevalia desertorum Eig & Feinbrun in Beih. Bot. Centralbl. 49 (2): 666, f.1 (1932)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.034.

Bellevalia eigii Feinbrun in Palestine J. Bot., Jerusalem Ser., 1: 357, t. 17, f. 3 (1940)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.016; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.029; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.016; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.036.

Bellevalia flexuosa Boiss., Diagn. Pl. Orient. 13: 36 (1854)

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.094; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00", 770 m. 24.03.1989, 13.032.

Bellevalia longipes Post in Bull. Herb. Boissier 3: 165 (1895)

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.089.

Bellevalia mosheovii Feinbrun in Palestine J. Bot., Jerusalem Ser., 1: 380, f. 35 & t. 18, f. 12 (1940)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.033; **Negev Highlands:**

Nahal Loz and Borot Loz (various habitats), 34°39'30"E-30°30'00"N. 960-1000 m. 27.03.1989, 20.004; Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.019.

Bellis perennis L., Sp. Pl.: 886 (1753)

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.017.

Beta vulgaris L., Sp. Pl. 222 (1753)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.041; Lower Jordan Valley: 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.011; Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.003; Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.039; Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.025.

Bifora testiculata (L.) Sprengel, Syst. Veg. 6: xxxviii, 448 (1820)

Golan: Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.025.

Biscutella didyma L., Sp. Pl.: 653 (1753)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.019; Samarian Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.007; Judean Mts: Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.014; Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.011; Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.070; Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.015.

***Biserrula pelecinus* L., Sp. Pl.: 762 (1753) [*Astragalus pelecinus* (L.) Barneby]**

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.031; **Golan:** near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.006; **Golan:** Yahudiya forest. Park forest of *Quercus ithaburensis* on basalt, 35°40'30"E-32°55'25"N. 40-50 m. 3.4.89, 45.002.

***Bituminaria bituminosa* (L.) Stirton in Bothalia 13: 318 (1981) [*Psoralea bituminosa* L.]**

Golan: Yahudiya forest. Park forest of *Quercus ithaburensis* on basalt, 35°40'30"E-32°55'25"N. 40-50 m. 3.4.89, 45.001; **Lower Galilee:** 1 km N of Nazareth. Cultivated rendzina on Senonian chalk, 35°19'00"E-32°44'00"N. 400 m. 6.4.89, 55.004.

***Blepharis ciliaris* (L.) B. L. Burt in Notes Roy. Bot. Gard. Edinburgh 22: 94 (1956)**
[*B. edulis* (Forsskål) Pers.; *B. persica* (Burm. fil.) O. Kuntze]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.048; **Southern Negev:** Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.013.

***Bongardia chrysogonum* (L.) Griseb., Spic. Fl. Rumel. 1: 294 (1843)**

Samarian Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.028; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.035.

***Brachypodium distachyon* (L.) P. Beauv., Ess. Agrostogr. 101, 155 (1812)**
[*Trachynia distachya* (L.) Link]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonion siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.092; **Philistean Plain:** 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydothymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.068; **Dead Sea Valley:** near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.014.

***Brassica tournefortii* Gouan, Ill. Observ. Bot.: 44 (1773)**

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydolithymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.050; **Philistean Plain:** 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.001; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.051; **Negev Highlands:** Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"E. 330 m. 30.03.1989, 34.009.

***Briza maxima* L., Sp. Pl.: 70 (1753) ·**

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydolithymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.049; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.010.

***Bromus alopecuroides* Poiret, Voy. Barb. 2: 100 (1789)**

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.050; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.061; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.057; **Golan:** Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.033; **Upper Galilee:** Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.049; **Upper Galilee:** Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.050.

***Bromus chrysopogon* Viv., Fl. Libyc. Spec. 4 (1824)**

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydolithymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.069; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.034; **Bet-Shean Valley:** 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.037.

A new record for Israel.

***Bromus diandrus* Roth, Bot. Abh. Beobacht.: 44 (1787)**

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.071; **Philistean Plain:** 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.020; 04.027; **Judean Mts:** Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.042.

***Bromus fasciculatus* C. Presl, Cyper. Gramin. Sicul.: 39 (1820)**

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.023; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.037; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.052; **Judean Foothills:** near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.096, 02.104; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.003; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.055; **Lower Jordan Valley:** 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.019; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.044; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.019; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.049.

***Bromus japonicus* Thunb., Fl. Jap.: 52, t. 11 (1784)**

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.022, 39.024.

***Bromus lanceolatus* Roth, Catal. Bot. 1: 18 (1797)**

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.059; **Kinnrot Valley (Upper Jordan Valley):** near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.041; **Golan:** Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.033; 43.038; **Judean Desert:** near Mishor Adumim. Stony slopes

with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.002.

***Bromus madritensis* L.**, Cent. Pl. 1: 5 (1755), subsp. *haussknechtii* (Boiss.) H. Scholz in Willdenowia 19: 107 (1989)

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.036; **Judean Mts:** Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.009; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.054; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.019; **Southern Negev:** 6 km S of Zihor junction. chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.008.

***Bromus pseudobrachystachys* H. Scholz** in Bot. Jahrb. Syst. 91: 462 (1972)

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.032.

A new record for Israel.

***Bromus rubens* L.**, Cent. Pl. 1: 5 (1755)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydothymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.076; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.028; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.012.

***Bromus scoparius* L.**, Cent. Pl. 1: 6 (1755)

Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.004.

***Bromus sericeus* Drobov** in Repert. Spec. Nov. Regni Veg. 21: 39 (1925)

Negev Highlands: Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"N. 330 m. 30.03.1989, 34.016.

A new record for Israel.

***Bromus sterilis* L., Sp. Pl.: 77 (1753)**

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.022.

***Bromus syriacus* Boiss. & Blanche in Boiss., Diagn. Pl. Orient. ser. 2, 4: 139 (1859)**

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.046.

***Bromus tectorum* L., Sp. Pl.: 77 (1753)**

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.011; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.015; **Golan:** Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.023.

***Brunnera orientalis* (Schenk) I. M. Johnston in Contr. Gray Herb., ser. 2, 73: 55 (1924)**

Mt. Hermon: lower teliferique. Slopes of hard karstic Jurassic limestones, 35°46'20"E-33°17'30"N. 1690 m. 4.4.89, 49.002.

***Bryonia syriaca* Boiss., Diagn. Pl. Orient., ser. 2, 2: 59 (1856)**

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.036; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00", 770 m. 24.03.1989, 13.004.

***Bupleurum lancifolium* Hornem., Hort. Hafn.: 267 (1813) [*B. subovatum* Sprengel]**

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.057; **Bet-Shean Valley:** 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.013; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.050.

Bupleurum semicompositum L., Demonstr. Pl.: 12 (1753).

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.012.

Cakile maritima Scop., Fl. Carniol., ed. 2, 2: 35 (1772), subsp. *maritima*

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.024.

Calendula arvensis L., Sp. Pl., ed. 2: 1303 (1763) [*C. aegyptiaca* auct. (non Pers.)]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.004; **Philistean Plain:** 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.045; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.066; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.001; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.052; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.003; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.044.

Calendula tripterocarpa Rupr. in Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Pétersbourg 14: 231 (1856)

Negev Highlands: 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.024; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.010; **Southern Negev:** Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.027.

Calepina irregularis (Asso) Thell. in Schinz & R. Keller, Fl. Schweiz ed. 2: 218 (1905)

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.011.

Calicotome villosa (Poiret) Link in Neues J. Bot. 2 (2): 51 (1808)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydothymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.103; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.045.

Calligonum comosum L'Hér. in Trans. Linn. Soc. London 1: 180 (1791) [*C. polygonoides* subsp. *comosum* (L'Hér.) Soskov]

Negev Highlands: Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"N. 330 m. 30.03.1989, 34.015; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.009.

Callipeltis aperta Boiss. & Buhse in Nouv. Mem. Soc. Imp. Naturalistes Moscou 12: 110 (1860)

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.042.

Although this taxon has been considered by Ehrendorfer & Schönbeck-Temesy (in Davis Fl. Turkey 7: 850. 1982) as a "forma" of *C. cucullaria* (L.) Steven, it is better separated as a distinct species as accepted by Feinbrun-Dothan (Fl. Palaest. 3: 273. 1978). The bracteoles are flat instead of cucullate as in *C. cucullaria*, the pedicels are glabrous instead of puberulous, and flowers and fruits are smaller: corolla c. 0.5 mm and mericarps are not more than 1.4 mm, as in *C. aperta*, while in *C. cucullaria* the corolla is 0.5-0.7 mm and the mericarps vary from 1.4 to 2 mm.

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Callipeltis cucullaria (L.) Steven in Mém. Soc. Imp. Naturalistes Moscou 7: 275 (1829)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.062; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.036.

Campanula camptoclada Boiss., Diagn. Pl. Orient. 11: 63 (1849)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.056.

Campanula erinus L., Sp. Pl.: 169 (1753)

Negev Highlands: 5 km SW of Yerokham. Loessial soil and near outcrops of smooth-faced limestone, 34°53'40"E-31°58'00"N. 500 m. 27.03.1989, 23.008; Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.014.

Campanula hierosolymitana Boiss., Diagn. Pl. Orient. 11: 62 (1849)

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.048.

Campanula stellaris Boiss., Diagn. Pl. Orient. 11: 63 (1849)

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.045.

Capparis aegyptia Lam., Encycl. 1: 605 (1785)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.011; Negev Highlands: Makhtesh Hazera (Makhtesh Katan). Sandy alluvium. pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.007.

Capsella bursa-pastoris (L.) Medicus, Pfl.-Gatt.: 85 (1792)

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.009.

Cardamine hirsuta L., Sp. Pl.: 655 (1753)

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.010.

Cardaria draba (L.) Desv. in J. Bot. Agric. 3: 163 (1815) [*Lepidium draba* L.]

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.076; Judean Mts: Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.017; Negev Highlands: 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.018.

Carduus argentatus L., Mant. Pl.: 280 (1771)

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.032.

Carduus getulus Pomel, Nouv. Mat. Fl. Atlant. 2: 275 (1875)

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.018.

Carduus pycnocephalus L., Sp. Pl., ed. 2: 1151 (1763)

Phillstean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.043; Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.040; Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.016.

The material collected in Israel (gatherings 04.043, 17.040 and 38.016) agree with *Carduus pycnocephalus* L. from the Iberian Peninsula rather than with *C. getulus* Pomel as defined in Davis, Fl. Turkey 5: 438 (1975).
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Carex distans L., Syst. Nat., ed. 10: 1263 (1759)

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.039.

Carex divisa Hudson, Fl. Angl.: 348 (1762)

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.034; Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.032; Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.032.

Carex hispida Willd. in Schkuhr, Beschr. Riedgräs. 1: 63, t. S f. 64 (1801)

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.033.

Carex pachystylis J. Gay in Ann. Sci. Nat., Bot., ser. 2, 10: 301 (1838)

Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.004; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.059.

Carrichtera annua (L.) DC. in Mém. Mus. Hist. Nat. 7: 250 (1821)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.030; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noacetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.011; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.015; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.057.

Catabrosa aquatica (L.) P. Beauv., Ess. Agrostogr.: 97, 157 (1812)

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.039.

Catananche lutea L., Sp. Pl.: 812 (1753)

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.076; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.022; **Upper Galilee:** Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.006.

Catapodium marinum (L.) C. E. Hubb. in Kew Bull. 1954: 375 (1954) [*C. loliaceum* (Hudson) Link]

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.038.

Catapodium rigidum (L.) C. E. Hubb. in Dony, Fl. Bedfordshire: 427 (1953) [*Scleropoa rigida* (L.) Griseb.]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.067; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis*

brachyodon, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.101; **Kinnrot Valley (Upper Jordan Valley)**: near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.011; **Coastal Galilee**: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.030.

Caylusea hexagyna (Forsskål) M. L. Green in Brit. Bot., Int. Bot. Congr. Cambridge 1930, Nomencl. Prop.: 102 (1929) [*C. canescens* (L.) Walpers]

Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.009; **Southern Negev**: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.033.

Centaurea aegyptiaca L., Mant. Pl.: 118 (1767)

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.002; **Negev Highlands**: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.045; **Southern Negev**: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.017.

Centaurea ammocyanus Boiss., Diagn. Pl. Orient. 10: 109 (1849)

Negev Highlands: 5 km SW of Yerokham. Loessial soil and near outcrops of smooth-faced limestone, 34°53'40"E-31°58'00"N. 500 m. 27.03.1989, 23.003; **Negev Highlands**: 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.037.

Centaurea damascena Boiss., Diagn. Pl. Orient. 10: 112 (1849)

Negev Highlands: Nahal Loz and Borot Loz (various habitats), 34°39'30"E-30°30'00"N. 960-1,000 m. 27.03.1989, 20.006.

Centaurea hyalolepis Boiss., Diagn. Pl. Orient. 6: 133 (1846)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.050; **Lower Jordan Valley**: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.010; **Northern Negev**: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.015; **Bet-Shean Valley**: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms

and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.011.

Centaurea lanulata Eig, Pl. Palestina, Anal. Key: 396 (1931)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.037.

Centaurea pallescens Delile, Descr. Egypte, Hist. Nat.: 278 (1813-1814) [*C. calcitrapella* Bornm. & Dinsm.]

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.013; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.044; **Arava Valley:** Yotvata. Disturbed ground and wadis, 35°03'30"E-29°59'10"N. 100 m. 29.03.1989, 31.010; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.006.

Centaurea procurrens Sprengel, Syst. Veg. 3: 407 (1826)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.025.

Centaurea scoparia Sprengel, Syst. Veg. 3: 402 (1826) [*Phaeopappus scoparius* (Sprengel) Boiss.]

Southern Negev: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.036.

Centaureum tenuiflorum (Hoffmanns. & Link) Fritsch in Mitt. Naturwiss. Vereins Univ. Wien, ser. 2, 5: 97 (1907) [*C. umbellatum* auct.]

Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.028.

Cerastium dichotomum L., Sp. Pl.: 438 (1753)

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.006.

Cerastium dubium (Bast.) Guépin, Fl. Maine & Loire: 267 (1830) [*C. anomalum* Willd.]

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.044; **Golan:** Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.015.

Cerastium glomeratum Thuill., Fl. Paris, ed. 2: 226 (1800) [*C. viscosum* L.]

Golan: Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.013; **Golan:** Odem Forest, near Masa'ada. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.033; **Upper Galilee:** near Sasa. Muddy soil at the margins of a vernal pool, 35°23'20"E-33°04'15"N. 810 m. 5.4.89, 52.007.

Ceratocarpus turbinata (DC.) Lidén in Opera Bot. 88: 38 (1986) [*C. palaestina* Boiss.]

Mt. Hermon: near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaat Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.001.

Ceratocephala falcata (L.) Pers., Syn. Pl. 1: 341 (1805)

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.062; **Negev Highlands:** Nahal Loz and Borot Loz (various habitats), 34°39'30"E-30°30'00"N. 960-1,000 m. 27.03.1989, 20.009; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.007; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.027; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.007; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.038.

Cercis siliquastrum L., Sp. Pl.: 374 (1753)

Mt. Carmel: Upper Nahal Neshet, 2 km S of Neshet. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.007.

Chaetosciadium trichospermum (L.) Boiss., Fl. Orient. 2: 1078 (1872)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.065; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown

lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.045, 05.092; Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.069.

Cheilanthes acrostica (Balbis) Tod. in Giorn. Sci. Nat. Econ. Palermo 1: 215 (1866)
[*C. pteridioides* auct.; *C. fragrans* auct.]

Judean Mts: Jerusalem. near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'E-31°45'15"N, 780 m. 24.03.1989, 12.024.

See Nardi & Reichstein (in Webbia 39: 135-139. 1985) for the confused nomenclature of this species.

Cheilanthes vellea (Aiton) F. Mueller, Fragm. 5: 123 (1866) [*C. catanensis* (Cosent.) H. P. Fuchs]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.033.

Chenopodium murale L., Sp. Pl.: 219 (1753)

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.041.

Chiliadenus iphionoides (Boiss. & Blanche) Brullo in Webbia 34: 301 (1980)
[*Varthemia iphionoides* Boiss. & Blanche]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.086.

Chlamydomphora tridentata (Delile) Less., Syn. Gen. Compos.: 266 (1832)

Lower Jordan Valley: 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.001.

Chrysanthemum coronarium L., Sp. Pl.: 890 (1753)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydothymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.005.

Chrysanthemum myconis L., Sp. Pl., ed. 2: 1254 (1763)

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.042.

Cicer pinnatifidum Jaub. & Spach in Ann. Sci. Nat., Bot., ser. 2, 18: 227 (1842)

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00", 770 m. 24.03.1989, 13.018.

Cichorium pumilum Jacq., Obs. Bot. 4: 3, t. 80 (1771)

Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.012.

Cistanche salsa (C. A. Meyer) G. Beck in Engler & Prantl, Nat. Pflanzenfam. 4 (3b): 129 (1893)

Southern Negev: 6 km S of Zihor junction. chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.018.

Cistanche tubulosa (Schenk) Hooker fil., Fl. Brit. India 4: 324 (1884) [*C. lutea* auct.]

Dead Sea Valley: near Ormat's solar ponds, 2 km N of the Dead Sea northern coast. Salty soil in wadis, 35°30'31"E-31°48'10"N, (-)370 m. 22.03.1989, 07.013; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium. pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.008.

Cladium mariscus (L.) Pohl, Tent. Fl. Bohem. 1: 32 (1809)

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.022.

Clematis cirrhosa L., Sp. Pl.: 544 (1753)

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.036.

Cleome arabica L., Cent. Pl. 1: 20 (1755) [*C. trinervia* Fresen.]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.003; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.015.

Clypeola jonthlaspi L., Sp. Pl.: 652 (1753)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.032; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.032; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.032.

Cnicus benedictus L., Sp. Pl.: 826 (1753)

Judean Mts: Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.031; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.016; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.023.

Colchicum ritchii R. Br. in Denham & al., Narr. Travels Africa: 241 (1826)

Negev Highlands: 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.018.

Colchicum tunicatum Feinbrun, Palestine J. Bot., Jerusalem Ser., 6: 87, t. 2, f.11; t. 3, f. 2-3 (1953)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.046; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.021.

Colutea istria Miller, Gard. Dict., ed. 8: *Colutea* n° 2 (1768)

Negev Highlands: Nahal Loz and Borot Loz (various habitats), 34°39'30"E-30°30'00"N. 960-1,000 m. 27.03.1989, 20.003.

Convolvulus althaeoides L., Sp. Pl.: 156 (1753)

Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.042.

Convolvulus arvensis L., Sp. Pl.: 153 (1753)

Lower Jordan Valley: 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.006;
Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.003.

Convolvulus auricomus (A. Rich.) Bhandari in Bull Bot. Surv. India 6: 324 (1964)
[*C. glomeratus* Choisy (non Thunb.)]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.010.

Convolvulus coelesyriacus Boiss., Diagn. Pl. Orient. 11: 85 (1849)

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.030.

Convolvulus pentapetaloides L., Syst. Nat., ed. 12, 3: 229 (1768)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.067; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.026; **Upper Galilee:** Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.020.

Convolvulus secundus Desr. in Lam., Encycl. 3: 553 (1792)

Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.004.

Convolvulus siculus L., Sp. Pl.: 156 (1753)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989,

03.051; Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.056; **Judean Mts: Kiryat Anavim.** 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.053.

Convolvulus spicatus Hallier fil. in Bot. Jahrb. Syst. 18: 99 (1894)

Negev Highlands: Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"E. 330 m. 30.03.1989, 34.024.

Conyza bonariensis (L.) Cronquist, Bull. Torrey Bot. Club 70: 632 (1943) [*Erigeron crispus* Pourret]

Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.027.

Cornucopiae alopecuroides L., Mant. Pl.: 29 (1767) [*C. involucratum* (Post) Mez]

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.005.

Coronilla repanda (Poiret) Guss., Fl. Sicul. Syn. 2: 302 (1844)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.095.

Coronilla rostrata Boiss. & Spruner in Boiss. Diagn. Pl. Orient. 2: 100 (1843) [*C. parviflora* Willd. (non Moench)]

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.044.

Coronilla scorpioides (L.) Koch, Syn. Fl. Germ. Helv.: 188 (1835)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.053; **Samaritan Desert: near Ma'ale Michmash.** Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.023.

Coronopus squamatus (Forsskål) Ascherson, Fl. Prov. Brandenburg 1: 62 (1860)

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.019.

Corydalis triternata Zucc. in Abh. Math.-Phys. Cl. Königl. Bayer. Akad. Wiss. 3: 251 (1843) [*C. solida* auct.]

Mt. Hermon: lower teliferique. Slopes of hard karstic Jurassic limestones, 35°46'20"E-33°17'30"N. 1690 m. 4.4.89, 49.004.

Corynephorus articulatus (Desf.) P. Beauv., Ess. Agrostogr.: 90, 159 (1812) [*C. divaricatus* auct.]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydolithymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.072; Negev Highlands: Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"N. 330 m. 30.03.1989, 34.018.

See Kerguélen (in *Lejeunia*, ser. 2, 110: 42. 1983) for an overview of the nomenclatural controversy surrounding this species.

Crambe hispanica L., Sp. Pl.: 671 (1753)

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.013.

Crassula alata (Viv.) A. Berger in Engler & Prantl, Nat. Pflanzenfam., ed. 2, 18a: 389 (1930) [incl. *Tillaea muscosa* L.]

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.037; Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.022; Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.019.

This species should not be separated from *C. tillaea* Lester-Garland at specific level. *C. alata* has pedicellate flowers, while in *C. tillaea* they are sessile, and the sepals are slightly wider in *C. alata* than in *C. tillaea*. *C. tillaea* should better be treated as a variety of *C. alata*.

B. VALDÉS

Crataegus aronia (L.) DC., Prodr. 2: 629 (1825) [*C. azarolus* L.]

Judean Mts: Jerusalem. near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.013.

Crepis aculeata (DC.) Boiss., Fl. Orient. 3: 856 (1875)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydothymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.106; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.013.

Crepis aspera L., Sp. Pl., ed. 2: 1132 (1763)

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.017; **Bet-Shean Valley:** 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.010; **Coastal Galilee:** coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.027.

Crepis palaestina (Boiss.) Bornm. in Beih. Bot. Centralbl. 31 (2): 236 (1914)

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.037; **Kinnrot Valley (Upper Jordan Valley):** near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.013; **Golan:** Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.043; **Golan:** near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.033; **Upper Galilee:** Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.019.

Crepis reuteriana Boiss., Diagn. Pl. Orient. 11: 55 (1849)

Mt. Hermon: near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaat Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.012; **Mt. Carmel:** Upper Nahal Neshet, 2 km S of Neshet. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.010.

Crepis sancta (L.) Bornm. in Mith. Thüring. Bot. Vereins 30: 79, viii (1913)
[*Lagoseris obovata* (Boiss. & Noe) Bornm.]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia*

lentiscus association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.006; **Philistean Plain:** 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.019; **Judean Mts:** Jerusalem. near Ora. Terraces on marly-chalk with poor vegetation of *Coridolithum capitati*, 35°09'E-31°45'15"N, 780 m. 24.03.1989, 12.022; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.041.

Crepis syriaca (Bornm.) Bab. & Navashin in Biblioth. Genet. 6: 75 (1930)

Golan: Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.017.

Crithopsis delileana (Schultes & Schultes fil.) Roz., Zlaki: 319 (1937) [*Elymus geniculatus* Delile (non Curtis)]

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.053; **Judean Desert:** 5 km SW of Jericho, near St. John's Monastery. Stony slopes, 35°27'55"E-31°50'30"N, (-)10 m. 23.03.1989, 11.001.

Crotalaria aegyptiaca Bentham in London J. Bot. 2: 473 (1843)

Southern Negev: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.014.

Crucianella herbacea Forsskål, Fl. Aegypt.-Arab.: 30 (1775)

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.049.

Crucianella macrostachya Boiss., Diagn. Pl. Orient. 3: 27 (1843)

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.028.

Cruciata articulata (L.) Ehrend. in Notes Roy. Bot. Gard. Edinburgh 22: 396 (1958)
[*Galium articulatum* (L.) Lam.]

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.066; **Upper Galilee:** Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.043.

Crupina crupinastrum (Moris) Vis., Fl. Dalm. 2: 42, t. 51, f. 3 (1847)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.020.

Ctenopsis pectinella (Delile) De Notaris in Ann. Sci. Nat., Bot., ser. 3, 9: 325 (1848)

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.010.

Cucumis prophetarum L., Cent. Pl. 1: 33 (1755)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.045.

Cuscuta approximata Bab. in Ann. Mag. Nat. Hist. 13: 253 (1844)

Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.021.

Cuscuta palaestina Boiss., Diagn. Pl. Orient. 11: 86 (1849)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.096.

Cuscuta planiflora Ten., Fl. Napol. 3: 250 (1824-1829)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.021.

Cuscuta aff. *planiflora* Ten.

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.016.

Cutandia dichotoma (Forsskål) Trabut, Fl. Algérie, Monocot.: 237 (1895)

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.038; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.048; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.026.

Cutandia maritima (L.) Barbey, Fl. Sard. Comp.: 72 (1885)

Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.031.

Cutandia memphitica (Sprengel) K. Richter, Pl. Eur. 1: 77 (1890)

Negev Highlands: 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.015; **Negev Highlands:** Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"N. 330 m. 30.03.1989, 34.017.

Cutandia philistaea (Boiss.) B. D. Jackson, Index Kew. 1: 675 (1893)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.074.

Cyclamen persicum Miller, Gard. Dict., ed. 8: *Cyclamen* n° 3 (1768)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.077; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.007.

Cynodon dactylon (L.) Pers., Syn. Pl. 1: 85 (1805)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.005; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.027.

Cynoglossum creticum Miller, Gard. Dict., ed. 8: *Cynoglossum* n° 3 (1768)

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.034; **Mt. Hermon:** near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.008.

Cynosurus callitrichus Barbey in C. Barbey & Barbey, Herb. Levant: 165, t. 10 (1882)

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.020; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.043.

Cynosurus echinatus L., Sp. Pl.: 72 (1753)

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.017.

Cyperus conglomeratus Rottb., Descr. P. Rar.: 16 (1772)

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.025; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.042.

Cyperus laevigatus L., Mant. Pl.: 179 (1771)

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.024.

Cyperus longus L., Sp. Pl.: 45 (1753)

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.021.

Dactylis glomerata L., Sp. Pl.: 71 (1753)

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.026; **Golan:** near the

ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.024; Mt. Carmel: Upper Nahal Neshet, 2 km S of Neshet. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.015.

Damasonium alisma Miller, Gard., Dict. ed. 8: *Damasonium* n° 1 (1768)

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.021.

Daucus subsessilis Boiss., Fl. Orient. Suppl.: 272 (1888)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.093; Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.014; Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.006.

Dianthus monadelphus Vent., Descr. Pl. Nouv.: 39 (1801), subsp. *judaicus* (Boiss.) Greuter & Burdet in Willdenowia 12: 186 (1982) [*D. judaicus* Boiss.]

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.066.

Dianthus sinaicus Boiss., Diagn. Pl. Orient. 1: 23 (1843)

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.060.

Dianthus strictus Banks & Solander in Russell, Nat. Hist. Aleppo, ed. 2, 2: 252 (1794) [*D. multipunctatus* Ser.]

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.038.

Dichanthium annulatum (Forsskål) Stapf in Oliver, Fl. Trop. Afr. 9: 178 (1917) [*Andropogon annulatus* Forsskål]

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.048; Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.039.

Dipcadi erythraeum Webb & Berth., Hist. Nat. Iles Canaries 3 (2,3): 341 (1848)

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.001.

Diploaxis acris (Forsskål) Boiss., Fl. Orient. 1: 389 (1867)

Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.055; Negev Highlands: Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.029.

Diploaxis eruroides (L.) DC., Syst. Nat. 2: 631 (1821)

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.004.

Diploaxis harra (Forsskål) Boiss., Fl. Orient. 1: 388 (1867)

Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.018; Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.069; Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.035; Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.060.

Drabopsis nuda (Bél.) Stapf in Denkschr. Kaiserl. Akad. Wiss. Wien, Math.-Naturwiss. Kl. 51: 298 (1886)

Mt. Hermon: lower teliférique. Slopes of hard karstic Jurassic limestones, 35°46'20"E-33°17'30"N. 1690 m. 4.4.89, 49.003.

Echinaria capitata (L.) Desf., Fl. Atlant. 2: 385 (1799)

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.030; Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.011.

Echinops gaillardotii Boiss., Diagn. Pl. Orient. ser. 2, 3: 38 (1856)

Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.027.

Echinops polyceras Boiss., Diagn. Pl. Orient. 10: 85 (1849) [*E. blancheanus* Boiss.]

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.049.

Echiochilon fruticosum Desf., Fl. Atlant. 1: 167 (1798)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.079; **Philistean Plain:** 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.024; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.043; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.014; **Negev Highlands:** Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"N. 330 m. 30.03.1989, 34.013.

Echium angustifolium Miller, Gard. Dict., ed. 8: *Echium* n° 6 (1768)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.080; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.003.

Echium judaeum Lacaite in J. Linn. Soc., Bot., 44: 366 (1919)

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.051; **Bet-Shean Valley:** 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.035.

Echium plantagineum L., Mant. Pl.: 202 (1771)

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.027.

Eleocharis palustris (L.) Roemer & Schultes, Syst. Veg. 2: 151 (1817)

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.035.

Elymus farctus (Viv.) Runem. in J. Linn. Soc., Bot., 76: 382 (1978) [*Agropyron junceum* (L.) P. Beauv.]

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.034.

Emex spinosa (L.) Campd., Monogr. Rumex: 58 (1819)

Negev Highlands: 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.004; Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.039.

Eminium spiculatum (Blume) Schott, Ariodeae: 16 (1855) [*Helicophyllum crassipes* (Boiss.) Schott]

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.024; Mt. Hermon: near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.014.

Enarthrocarpus arcuatus Labill., Icon. Pl. Syr. 5: 4 (1812)

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.026.

Enarthrocarpus strangulatus Boiss., Diagn. Pl. Orient. 8: 44 (1849)

Negev Highlands: Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.005; Negev Highlands: 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.047; Negev Highlands: 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.017.

Enneapogon persicus Boiss., Diagn. Pl. Orient. 5: 71 (1844)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.019.

Ephedra aphylla Forsskål, Fl. Aegypt.-Arab.: 170 (1775) [*E. alte* C. A. Meyer]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.005; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.025; **Southern Negev:** 6 km S of Zihor junction. chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.003.

Ephedra foeminea Forsskål, Fl. Aegypt.-Arab.: 219 (1775) [*E. fragilis* auct.; *E. campylopoda* C. A. Meyer]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.073; **Philistean Plain:** 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.010.

Eremostachys laciniata (L.) Bunge in Ledeb., Fl. Altaica 2: 416 (1830)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.044.

Erodium botrys (Cav.) Bertol., Amoen. Ital.: 35 (1819)

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.012.

Erodium ciconium (L.) L'Hér. in Aiton, Hort. Kew. 2: 414 (1789)

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.058; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.001.

In the Mediterranean region the mericarps of *Erodium ciconium* var. *ciconium* have glandular pits (see Davis, Fl. Turkey 2: 479. 1967; Webb & Chater, Fl. Eur. 2: 201. 1968; Guittonneau, Boissiera 20: 93. 1972; Zohary, Fl. Palaest. 2: 237. 1972) as is seen in the plants collected near Dimona, (n° 22.001). The plants collected near Nahal Elot (n°. 21.058) have, however, eglandular pits; otherwise, they agree with *E. ciconium* var. *ciconium*.

B. VALDÉS

Erodium cicutarium (L.) L'Hér. in Aiton, Hort. Kew. 2: 414 (1789)

Samaritan Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.042.

Erodium crassifolium L'Hér. in Aiton, Hort. Kew. 2: 414 (1789) [*E. hirtum* Willd.]

Dead Sea Valley: near Ormat's solar ponds, 2 km N of the Dead Sea northern coast. Salty soil in wadis, 35°30'31"E-31°48'10"N, (-)370 m. 22.03.1989, 07.003; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.040; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.046; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.034; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.053; **Southern Negev:** Near Kibbutz Shizafon. Wadis in gravel plain, 35°02'05"E-30°03'00"N. 430 m. 29.03.1989, 29.007.

Erodium glaucophyllum (L.) L'Hér. in Aiton, Hort. Kew. 2: 416 (1789)

Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.006; **Southern Negev:** Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.007.

Erodium gruinum (L.) L'Hér. in Aiton, Hort. Kew. 2: 415 (1789)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.023; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.003.

Erodium laciniatum (Cav.) Willd., Sp. Pl. 3: 633 (1800)

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.006; **Philistean Plain:** 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.066; **Southern Negev:** Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.008.

Erodium malacoides (L.) L'Hér. in Aiton, Hort. Kew. 2: 415 (1879)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.026; **Kinnrot Valley (Upper Jordan Valley):** near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-) 200 m. 3.4.89, 40.002.

Erodium moschatum (L.) L'Hér. in Aiton, Hort. Kew. 2: 414 (1789)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.027.

Erodium oxyrhynchum MB., Fl. Taur.-Caucas. 2: 133 (1808), subsp. *bryoniifolium* (Boiss.) Schönb.-Tem. in Rech. fil., Fl. Iran. 69: 43 (1970) [*E. bryoniifolium* Boiss.]

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.047; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.001; **Negev Highlands:** Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"N. 330 m. 30.03.1989, 34.023.

Erodium telavivense Eig in Beih. Bot. Centralbl. 50 (2): 233 (1932)

Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.040.

Erodium touchyanum Delile in Mém. Acad. Sci. Montpellier, Sect. Méd. 1: 423 (1853) [*E. deserti* (Eig) Eig]

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.043.

Erophila minima C. A. Meyer, Verz. Pfl. Casp. Meer.: 184 (1831)

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.016; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.008.

Erophila praecox (Steven) DC., Syst. Nat. 2: 357 (1821) [*E. verna* auct.]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.034; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.034.

Erophila verna (L.) Chevall., Fl. Gén. Env. Paris 2: 898 (1827)

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.008.

Eruca sativa Miller, Gard. Dict., ed. 8: *Eruca* n° 1 (1768), subsp. *longirostris* (Uechtr.) Jahandiez & Maire, Cat. Pl. Maroc: 279 (1932)

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.034; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.003.

Erucaria hispanica (L.) Druce in Bot. Exch. Club Soc. Brit. Isles 3: 418 (1914)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.032.

Erucaria microcarpa Boiss., Diagn. Pl. Orient. 8: 47 (1849) [*Reboudia pinnata* auct.]

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.036; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.015; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.045.

Erucaria pinnata (Viv.) Täckh. & Boulos in Publ. Cairo Univ. Herb. 5: 37 (1974) [*E. uncata* (Boiss.) Ascherson & Schweinf.]

Negev Highlands: Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"N. 330 m. 30.03.1989, 34.012.

Erucaria rostrata (Boiss.) Greuter & Burdet in Willdenowia 15: 419 (1986) [*E. boveana* Cosson]

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.074; **Dead Sea Valley:** near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.031; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.004; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.014; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.046; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium. pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.031.

Eryngium creticum Lam., Encycl. 4: 754 (1798)

Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.026.

Eryngium glomeratum Lam., Encycl. 4: 755 (1798)

Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.047.

Eryngium maritimum L., Sp. Pl.: 223 (1753)

Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.002.

Euphorbia arguta Banks & Solander in Russell, Nat. Hist. Aleppo, ed. 2, 2: 253 (1794)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.024.

Euphorbia aulacosperma Boiss., Diagn. Pl. Orient. 12: 117 (1853)

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.030.

Euphorbia berythea Boiss. & Blanche in Boiss., Diagn. Pl. Orient., ser. 2, 4: 82 (1859)

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.026.

Euphorbia chamaepeplus Boiss. & Gaill., Diagn. Pl. Orient. ser. 2, 4: 88 (1859)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.020; Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.037; Negev Highlands: 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.013.

Euphorbia chamaepeplus Boiss. & Gaill. var. *angustifolia* Danin var. nov.
A typo differt foliis angustis linearibus acutis, truncatis vel obtusis; semina aequalia vel minora.

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*; 34°47'00"E-31°18'30"N. 300 m. Precipitation: 220 mm. 26.03.1989, 15.057 (holotypus, HUU); Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*. 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.012.

Euphorbia exigua L., Sp. Pl.: 456 (1753)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.082.

Euphorbia hierosolymitana Boiss., Diagn. Pl. Orient. 12: 110 (1853) [*E. thamnoides* Boiss.]

Judean Mts: Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.019; Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.007.

Euphorbia peplus L., Sp. Pl.: 456 (1753)

Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.054; Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk.

Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.029.

Euphorbia ramonensis Baum in Bull. Soc. Bot. France 110: 49 (1963) [*E. hierosolymitana* Boiss. var. *ramonensis* (Baum) Zohary]

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.038.

Euphorbia retusa Forsskål, Fl. Aegypt.-Arab.: 93 (1775) [*E. kahirensis* Rauschel]

Southern Negev: Near Kibbutz Shizafon. Wadis in gravel plain, 35°02'05"E-30°03'00"N. 430 m. 29.03.1989, 29.004.

Euphorbia terracina L., Sp. Pl., ed. 2: 654 (1762)

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.022.

Factorovskya aschersoniana (Urban) Eig in Bull. Inst. Agric. Nat. Hist. Tel-Aviv 6: 18 (1927)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.049; Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.073; Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.067.

Fagonia arabica L., Sp. Pl.: 386 (1753)

Southern Negev: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.028; Southern Negev: 6 km S of Zihor junction. chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.006.

Fagonia bruguierii DC., Prodr. 1: 704 (1824)

Southern Negev: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.030.

Fagonia glutinosa Delile, Fl. Aeg. III. 62, 230 (1813)

Southern Negev: Near Kibbutz Shizafon. Wadis in gravel plain, 35°02'05"E-30°03'00"N. 430 m. 29.03.1989, 29.003; 29.008; **Negev Highlands:** Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"N. 330 m. 30.03.1989, 34.022; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.011.

Fagonia mollis Delile, Descr. Egyptes Hist. Nat.: 62, 220 (1813)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.006; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.007.

Fagonia sinaica Boiss., Diagn. Pl. Orient. 1: 61 (1843)

Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.009.

Farsetia aegyptia Turra, Farsetia Nov. Gen.: 3 (1765)

Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.012.

Ferula communis L., Sp. Pl.: 246 (1753)

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.063.

Ferula daninii Zohary, Fl. Palaest. 2: 439 (1972)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.001.

Fibigia clypeata (L.) Medicus, Pfl.-Gatt.: 90 (1792)

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m.

24.03.1989, 13.027; **Golan:** Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.027; **Mt. Hermon:** lower teliferique. Slopes of hard karstic Jurassic limestones, 35°46'20"E-33°17'30"N. 1690 m. 4.4.89, 49.012.

Filago contracta (Boiss.) Chrték & Holub in Preslia 53: 3 (1963) [*Evax contracta* Boiss.]

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.058; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.079; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.040.

Filago desertorum Pomel, Nouv. Mat. Fl. Atlant. 1: 46 (1874)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.042; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.039; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.022; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.006; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.045.

Filago eriocephala Guss., Pl. Rar.: 344, t. 59 (1826) [*F. germanica* auct.]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.015; **Upper Galilee:** Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.025.

Filago palaestina (Boiss.) Chrték & Holub in Preslia 35: 3 (1963) [*Evax palaestina* Boiss.]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.079; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.081; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.061.

***Filago pyramidata* L., Sp. Pl.: 1199 (1753) [*F. spathulata* C. Presl]**

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.082; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.020; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.034.

***Forsskaolea tenacissima* L., Opopalsamum: 18 (1764)**

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.012; **Southern Negev:** Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.011.

***Frankenia hirsuta* L., Sp. Pl.: 331 (1753)**

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.016.

***Frankenia pulverulenta* L., Sp. Pl.: 332 (1753)**

Lower Jordan Valley: 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.013.

***Fumana arabica* (L.) Spach in Ann. Sci. Nat., Bot., ser. 2, 6: 359 (1836)**

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.070; **Philistine Plain:** 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.054; **Judean Mts:** Kiryat Anavim, 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.051.

***Fumana thymifolia* (L.) Webb, Iter Hispan.: 69 (1838)**

Judean Mts: Jerusalem. near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'E-31°45'15"N, 780 m. 24.03.1989, 12.006.

Fumaria densiflora DC., Cat. Pl. Hort. Monsp.: 113 (1813)

Judean Foothills: near Netiv Halamed-hei. *Acacia albida* reserve, deep clayey soil (grumusol), 34°57'40"E-31°41'20"N. 270 m. 21.03.1989, 01.002; **Philistean Plain:** 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.035; **Philistean Plain:** 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.026; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.019; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.040; **Judean Mts:** Jerusalem. near Ora. Terraces on marly-chalk with poor vegetation of *Coridolithum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.027.

Fumaria parviflora Lam., Encycl. 2: 567 (1788)

Mt. Hermon: near the tomb and oak reserve of Sheikh Othman, 1 km E of Qala'at Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.009; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.009.

Gagea commutata C. Koch in Linnaea 22: 227 (1849)

Golan: Odem Forest, near Masa'ada. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.004.

Gagea fibrosa (Desf.) Schultes & Schultes fil., Syst. Veg. 7: 552 (1829)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.078.

Gagea reticulata (Pallas) Schultes & Schultes fil., Syst. Veg. 7: 542 (1829)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.043; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.005; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.036; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.045; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.024.

Gagea villosa (MB.) Duby, Bot. Gall. 1: 467 (1828)

Mt. Hermon: lower teliferique. Slopes of hard karstic Jurassic limestones, 35°46'20"E-33°17'30"N. 1690 m. 4.4.89, 49.010.

Galium aparine L., Sp. Pl.: 108 (1753)

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.053; **Bet-Shean Valley:** 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.018.

Galium ghilanicum Stapf in Denkschr. Kaiserl. Akad. Wiss. Wien, Math.-Naturwiss. Kl. 50: 53 (1886)

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.030.

A new record for Israel.

Galium hierochunticum Bornm. in Verh. K. K. Zool.-Bot. Ges. Wien 48: 596 (1898).

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.016.

Galium judaicum Boiss., Diagn. Pl. Orient. 10: 69 (1849)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.016; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.065; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.026; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.023; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.054; **Golan:** near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.038; **Golan:** 5 km E of Almagor. Pseudosavanna of *Ziziphus spina-christi* accompanied by annuals; protogrumusol on basalt, 35°39'30"E-32°54'30"N. (-)40 m. 3.4.89, 42.003.

Galium murale (L.) All., Fl. Pedem. 1: 8, t. 77, f. 1 (1785)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.012; **Judean Mts:** Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.003; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.039; **Coastal Carmel:** Atilit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.005.

Galium samuelssonii Ehrend. in Notes Roy. Bot. Gard. Edinburgh 22: 387 (1958)

Golan: Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.021.
Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.025.

Galium setaceum Lam., Encycl. 2: 584 (1788), var. *decaisnei* (Boiss.) Ehrend. in Ann. Naturhist. Mus. Wien 56: 237 (1948).

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.061; **Dead Sea Valley:** near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.040; **Philistean Plain:** 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydothymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.009; **Kinnrot Valley (Upper Jordan Valley):** near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.024.

Galium spurium L., Sp. Pl.: 106 (1753)

Lower Jordan Valley: 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.007.

Galium tricornutum Dandy in Watsonia 4: 47 (1957).

Samaritan Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.072.

Galium verrucosum Hudson in Philos. Trans. 56: 251 n° 2159 (1767) [*G. valantia* Weber]

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.072

Gastrocotyle hispida (Forsskål) Bunge, Delect. Sem. Hort. Dorpat. 1849: 2 (1849)

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.039; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.027; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.061; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.009; **Southern Negev:** 6 km S of Zihor junction. chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.009.

Gaudinia fragilis (L.) P. Beauv., Ess. Agrostogr.: 95, 164 (1812)

Golan: Nature Reserve (Bajuria), grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.031.

Geranium dissectum L., Cent. Pl. 1: 21 (1755)

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.027; **Golan:** Nature Reserve (Bajuria), grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.004.

Geranium molle L., Sp. Pl.: 682 (1753)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.025.

Geranium robertianum L., Sp. Pl.: 681 (1753), subsp. *purpureum* (Vill.) Nyman, Consp. Fl. Eur.: 138 (1878)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.087; **Judean Mts:** Jerusalem. near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.029; **Judean Mts:** Kiryat

Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.056.

***Geranium rotundifolium* L., Sp. Pl.: 683 (1753)**

Judean Mts: Jerusalem. near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.030; Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.055.

***Geranium tuberosum* L., Sp. Pl.: 680 (1753)**

Samaritan Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.034; Mt. Hermon: near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.011.

***Geropogon hybridus* (L.) Schultz-Bip. in Webb & Berth., Vis. Nat. Iles Canaries 3(2,2): 472 (1850)**

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.059; Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.023.

***Gladiolus atroviolaceus* Boiss., Diagn. Pl. Orient. 13: 14 (1854) [*G. aleppicus* Boiss.]**

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.009; Samaritan Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.090.

***Gladiolus italicus* Miller, Gard. Dict., ed. 8: *Gladiolus* n° 2 (1768) [*G. segetum* Ker-Gawler]**

Samaritan Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.095.

Glaucium grandiflorum Boiss. & Huet in Boiss., Diagn. Pl. Orient., ser. 2, 5: 15 (1856)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.047.

Globularia arabica Jaub. & Spach, Ill. Pl. Orient. 3: 76 (1848)

Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.044; **Negev Highlands:** 5 km SW of Yerokham. Loessial soil and near outcrops of smooth-faced limestone, 34°53'40"E-31°58'00"N. 500 m. 27.03.1989, 23.009.

Grewia villosa Willd. in Ges. Naturf. Freunde Berlin, Neue Schriften 4: 205 (1803)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.022.

Gundelia tournefortii L., Sp. Pl.: 814 (1753)

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.018.

Gymnarrhena micrantha Desf. in Mém. Mus. Hist. Nat. 4: 1, t. 4 (1818)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.047; **Dead Sea Valley:** near Ormat's solar ponds, 2 km N of the Dead Sea northern coast. Salty soil in wadis, 35°30'31"E-31°48'10"N, (-)370 m. 22.03.1989, 07.006; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.027; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.004.

Gymnocarpos decander Forsskål, Fl. Aegypt.-Arab.: 65 (1775) [*G. fruticosum* (Vahl) Pers.]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.071; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.043.

Gynandrisis sisyrinchium (L.) Parl., Nouv. Gen. Sp. Monocot.: 49 (1854)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.091; **Philistean Plain:** 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydorymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.075; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.092; **Judean Mts:** Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.044; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.054; **Judean Mts:** Kiryat Anavim, 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.012; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.032.

Gypsophila arabica Barkoudah in Wentia 9: 139 (1962)

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.067; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.036.

Gypsophila viscosa Murray in Commentat. Soc. Regiae Sci. Gott. Recent. 6, Cl. Phys.: 9 (1785)

Negev Highlands: Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"N. 330 m. 30.03.1989, 34.002.

Halothamnus acutifolius (Moq.) Boc. in Novosti Sist. Vyss. Rast. 18: 172 (1981)
[*Aellenia lancifolia* (Boiss.) Ulbr.]

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.050.

Hammado negevensis Il'in & Zohary in Novosti Sist. Vyss. Rast. 1: 71 (1964)

Southern Negev: 6 km S of Zihor junction. Chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.001; 28.005.

Hammada salicornica (Moq.) Iljin, Bot. Zurn. (Moskva & Leningrad) 33: 583 (1948)
[*Haloxylon salicornicum* (Moq.) Boiss.]

Arava Valley: Yotvata. Disturbed ground and wadis, 35°03'30"E-29°59'10"N. 100 m. 29.03.1989, 31.006.

Hammada scoparia (Pomel) Il'in in Bot. Zurn. (Moskva & Leningrad) 33: 583 (1948)
[*Haloxylon articulatum* (Cav.) Bunge]

Negev Highlands: 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.002.

Haplophyllum buxbaumii (Poiret) G. Don fil., Genist. 1: 780 (1831)

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.040; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.014.

Haplophyllum poorei C. Towns., Kew Bull. 20: 97, f. 3 (1966)

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.061.

Haplophyllum tuberculatum (Forsskål) Adr. Juss. in Mém. Mus. Hist. Nat. 12: 528 (1825) [*H. longifolium* Boiss.]

Southern Negev: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.021.

Hedypnois rhagadioloides (L.) F. W. Schmidt in Samml. Phys.-Ökon. Aufsätze 1: 279 (1795) [*H. cretica* (L.) Dum.-Courset]

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.021; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.036; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.055; **Kinnrot Valley (Upper Jordan Valley):** near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.017; 40.018; **Upper Galilee:** Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.047; **Coastal Galilee:** coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.009; **Coastal Carmel:** Atlit, coastal

sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.026; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.012; 15.013; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.018; **Samaritan Desert:** near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.075; **Mt. Carmel:** Upper Nahal Neshet, 2 km S of Neshet. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.011; **Upper Galilee:** Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.045.

In the Berlin set, the collections 08.075, 39.055, 40.018, 53.045 and 57.011 consist of plants with apically strongly swollen peduncles which are not constricted below the involucre. They correspond to *H. rhagadioloides* subsp. *tubaeformis* (Ten.) Hayek as keyed out in Rechinger (Fl. Aeg.: 678. 1943) based on Hayek (Prodr. Fl. Penins. Balcan. 2: 807. 1931). The plants no. 05.021, 09.018, 15. 012, 22. 036, 40.017 and 58.026 exhibit moderately incrassate peduncles, clearly constricted below the capitula, and accordingly represent *H. rhagadioloides* subsp. *rhagadioloides* (= subsp. *cretica* (L.) Hayek). Plants with thin, elongated, unswollen peduncles (known as *H. rhagadioloides* subsp. *monspeliensis* (Willd.) Hayek) could not be traced in the material of Iter Mediterraneum II. *Hedynois* is, according to Nordenstam (in Bot. Notiser 124: 489. 1971), "a case, where taxonomic revision, exclusively based on herbarium material, would be a highly precarious undertaking". For the purpose of this list we therefore adopt the view of the latter author "to lump the whole material in one heap" as is done in most current floras.

T. RAUS

Hedysarum spinosissimum L., Sp. Pl.: 750 (1753) [*H. pallens* (Moris) Halácsy]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.033; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.031.

Helianthemum aegyptiacum (L.) Miller, Gard. Dict. ed. 8: *Helianthemum* n° 23 (1768)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.027.

Helianthemum kahircum Delile, Descr. Egypte, Hist. Nat.: 213 (1814)

Negev Highlands: 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.004; **Southern Negev:** 8 km SE of Mizpe Ramon,

Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.004.

Helianthemum lasiocarpum Jacques & Hérincq, Man. Gén. Pl. 1: 120 (1845)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.026; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.033. **Kinnrot Valley:** near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.006; **Lower Galilee:** 1 km N of Nazareth. Cultivated rendzina on Senonian chalk, 35°19'00"E-32°44'00"N. 400 m. 6.4.89, 55.003.

Helianthemum ledifolium (L.) Miller, Gard. Dict., ed. 8: *Helianthemum* n° 20 (1768)

Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.020; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.031; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.036; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.002.

Helianthemum lippii (L.) Dum.-Courset, Bot. Cult. 3: 130 (1802)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.068; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.002; **Arava Valley:** Yotvata. Disturbed ground and wadis, 35°03'30"E-29°59'10"N. 100 m. 29.03.1989, 31.009.

Helianthemum salicifolium (L.) Miller, Gard. Dict., ed. 8: *Helianthemum* n° 21 (1768)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.076; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.036; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.003.

Helianthemum sancti-antonii Boiss., Fl. Orient. Suppl.: 70 (1888)

Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.008; **Southern Negev:** Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.032 p. p.; **Southern Negev:** 6 km S of Zihor junction. chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.002.

Specimen n° 27.032 in SEV is actually *H. lippii*. This is a result of mixed collection, because both taxa grow in the same habitat. A. DANIN & B. VALDÉS

Helianthemum sessiliflorum (Desf.) Pers., Syn. Pl. 2: 78 (1806)

Negev Highlands: Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"E. 330 m. 30.03.1989, 34.003.

Helianthemum stipulatum (Forsskål) C. Chr. in Dansk Bot. Ark. 4 (3): 20 (1922)
[*H. ellipticum* (Desf.) Pers.]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.082; **Philistean Plain:** 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.016; **Negev Highlands:** Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"E. 330 m. 30.03.1989, 34.001; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.001.

Helianthemum syriacum (Jacq.) Dum.-Courset, Bot. Cult. 3: 129 (1802) [*H. lavandulifolium* auct.]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.048; **Judean Mts:** Jerusalem. near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.040.

Helianthemum ventosum Boiss., Diagn. Pl. Orient. 8: 50 (1849)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.071; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.005.

Helianthemum vesicarium Boiss., Diagn. Pl. Orient. 8: 50 (1849)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.068.

Helichrysum sanguineum (L.) Kostel., Allg. Med.-Pharm. Fl.: 709 (1833)

Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.018; **Judean Foothills:** near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.004.

Heliotropium arbainense Fresen. in Mus. Senckenberg. 1: 168 (1833)

Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.017.

Heliotropium maris-mortui Zohary in Palestine J. Bot., Jerusalem Ser., 2: 177 (1941)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.023.

Heliotropium rotundifolium Lehm., Icon. Descr. Nov. Stirp.: 19 (1821)

Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.009.

Herniaria hemistemon J. Gay in Rev. Bot. Recueil Mens. 2: 371 (1847)

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.058; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.003; **Negev Highlands:** Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.014; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.030.

***Herniaria hirsuta* L., Sp. Pl.: 218 (1753)**

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaeetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.056; **Negev Highlands:** Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.013; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.008; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.001.

***Hippocrepis areolata* Desv. in Mém. Soc. Linn. Paris 4: 329 (1826) [*H. bicontorta* Loisel.]**

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaeetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.036; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.016.

***Hippocrepis multisiliquosa* L., Sp. Pl.: 744 (1753)**

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydorythetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.091; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.044.

***Hippocrepis unisiliquosa* L., Sp. Pl.: 744 (1753)**

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.044; **Philistean Plain:** 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydorythetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.092; **Dead Sea Valley:** near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.034; **Samaritan Desert:** near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.009; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.039; **Negev Highlands:** Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.001; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.066; **Mt. Hermon:** near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.022.

Hirschfeldia incana (L.) Lagréze-Fossat, Fl. Tarn & Garonne: 19 (1847)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.075; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.001.

Holosteum glutinosum (MB.) Fischer & C.A. Meyer, Ind. Sem. Hort. Petrop. 6: 52 (1840)

Negev Highlands: Nahal Loz and Borot Loz (various habitats), 34°39'30"E-30°30'00"N. 960-1,000 m. 27.03.1989, 20.007; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.025.

Holosteum umbellatum L., Sp. Pl.: 88 (1753)

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.056.

Hordeum bulbosum L., Cent. Pl. 2: 8 (1756)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.094.

Hordeum glaucum Steudel, Syn. Pl. Glumac. 1: 352 (1854) [*H. leporinum* auct.; *H. murinum* auct.]

Philistine Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.019; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.001; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.046; **Lower Jordan Valley:** 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.020; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.049; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.053.

Hordeum spontaneum C. Koch in Linnaea 21: 430 (1848)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*,

35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.098; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.054; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.012; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.035; **Southern Negev:** Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.022; **Negev Highlands:** Makhtesh Hathira, Nahal Hathira. Sandy-silty wadi, 35°01'00"E-30°57'03"N. 310 m. 30.03.1989, 33.003; **Bet-Shean Valley:** 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.029; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.021.

Hormuzakia aggregata (Lehm.) Gusuleaç in Publ. Soc. Nat. România 6: 8 (1923)
[*Anchusa aggregata* Lehm.]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.047; **Philistean Plain:** 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.023; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.029.

The very characteristic fruits clearly do not allow this taxon to be included in the genus *Anchusa*, as was done by Greuter & al. (Med-Checklist 1: 69. 1984). Pollen grains of this species have 6-7 equatorial apertures (M. I. Díez, pers. comm.), which do not occur in any *Anchusa* species.

B. VALDÉS

Hymenocarpus circinnatus (L.) Savi, Fl. Pis. 2: 205 (1798)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.050; **Philistean Plain:** 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.086; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.077; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.022; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.053; **Golan:** near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.028.

***Hymenolobus procumbens* (L.) Nutt., Fl. N. Amer. 1: 117 (1838)**

Lower Jordan Valley: 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.002;
Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.025.

***Hyoscyamus aureus* L., Sp. Pl.: 180 (1753)**

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.002.

***Hyoscyamus desertorum* (Boiss.) Täckh. in Svensk Bot. Tidskr. 36: 252 (1942)**

Southern Negev: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.001.

***Hyparrhenia hirta* (L.) Stapf in Oliver Fl. Trop. Afr. 9: 315 (1919) [*Andropogon hirtus* L.]**

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.016; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.021; **Golan:** 5 km E of Almagor. Pseudosavanna of *Ziziphus spina-christi* accompanied by annuals; protogrumusol on basalt, 35°39'30"E-32°54'30"N. (-)40 m. 3.4.89, 42.001.

***Hypecoum imberbe* Sm., Fl. Graec. Prodr. 1: 107 (1806) [*H. grandiflorum* Bentham]**

Judean Mts: Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.011.

***Hypericum lanuginosum* Lam., Encycl. 4: 171 (1797)**

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.084.

***Hypericum thymifolium* Banks & Solander in Russell, Nat. Hist. Aleppo, ed. 2, 2: 270 (1794) [*H. serpyllifolium* Lam.]**

Mt. Carmel: Upper Nahal Nesher, 2 km S of Nesher. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.005.

Ifloga spicata (Forsskål) Schultz in Webb & Berth., Hist. Nat. Iles Canaries 3 (2,2): 310 (1845)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on Kurkar (calcareous sandstone). *Corydothymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.010; **Philistean Plain:** 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.014; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noacetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.023; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.041; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.047; **Southern Negev:** Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.016.

Imperata cylindrica (L.) Rauschel, Nomencl. Bot., ed. 3: 10 (1797)

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.020.

Iris regis-uzziae Feinbrun in Notes Roy. Bot. Gard. Edinburgh 37: 75 (1978)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.051.

Isatis lusitanica L., Sp. Pl.: 670 (1753) [*I. aleppica* Scop.]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.020; **Judean Mts:** Jerusalem. near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.015.

Isatis microcarpa Boiss. in Ann. Sci. Nat., Bot., ser. 2, 17: 201 (1842)

Southern Negev: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.002.

Ixiolirion tataricum (Pallas) Herbert, Appendix: 37, t. 2 (1821) [*I. montanum* (Labill.) Herbert]

Negev Highlands: 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.017.

Juncus acutus L., Sp. Pl.: 325 (1753)

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.030.

Juncus bufonius L., Sp. Pl.: 328 (1753)

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.005.

Kickxia acerbiana (Boiss.) Täck. & Boulos in Publ. Cairo Univ. Herb. 5: 98 (1974)
[*Linaria acerbiana* Boiss.]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.062.

Kickxia aegyptiaca (L.) Náb. in Spisy Průř Fak. Masarykovy Univ. 70: 31 (1926)
[*Linaria aegyptiaca* (L.) Dum.-Courset]

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.002; **Kinnrot Valley (Upper Jordan Valley):** near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.007.

Kickxia floribunda (Boiss.) Täckh. & Boulos in Publ. Cairo Univ. Herb. 5: 97 (1974)
[*Linaria floribunda* Boiss.]

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.009; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.034; **Southern Negev:** Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.039; **Southern Negev:** Near Kibbutz Shizafon. Wadis in gravel plain, 35°02'05"E-30°03'00"N. 430 m. 29.03.1989, 29.009.

Kickxia spartioides (Buch) Janchen in Österr. Bot. Z. 82: 152 (1933) [*Linaria macilenta* auct.]

Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.037; **Southern Negev:** Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.012.

Koelpinia linearis Pallas, Reise Russ. Reich. 3: 755 (1776)

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.005.

Lagoecia cuminoides L., Sp. Pl.: 203 (1753)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.071; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.064; 05.094; **Golan:** 5 km E of Almagor. Pseudosavanna of *Ziziphus spina-christi* accompanied by annuals; protogrumusol on basalt, 35°39'30"E-32°54'30"N. (-)40 m. 3.4.89, 42.005.

Lagurus ovatus L., Sp. Pl.: 81 (1753)

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.017; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.039.

Lamarckia aurea (L.) Moench, Methodus: 201 (1794)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.007; **Dead Sea Valley:** near Ormat's solar ponds, 2 km N of the Dead Sea northern coast. Salty soil in wadis, 35°30'31"E-31°48'10"N, (-)370 m. 22.03.1989, 07.009; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.035; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.010; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.024.

***Lamium amplexicaule* L., Sp. Pl.: 579 (1753)**

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.048; **Judean Mts:** Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.038; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.010.

***Lamium garganicum* L., Sp. Pl., ed. 2: 808 (1763), subsp. *striatum* (Sm.) Hayek in Repert. Spec. Nov. Regni Veg. Beih. 30(2): 275 (1929) [*L. striatum* Sm.]**

Mt. Hermon: lower teliférique. Slopes of hard karstic Jurassic limestones, 35°46'20"E-33°17'30"N. 1690 m. 4.4.89, 49.007.

***Lamium moschatum* Miller, Gard. Dict., ed. 8: *Lamium* n° 4 (1768)**

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.031; **Golan:** Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.018.

***Lappula spinocarpos* (Forsskål) Ascherson in Verh. Bot. Vereins Prov. Brandenburg 16, Sizungsber.: 88 (1874) [*Sclerocaryopsis spinocarpos* (Forsskål) Brand]**

Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.006; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.060; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.049; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.010; **Southern Negev:** 6 km S of Zihor junction. chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.011; **Southern Negev:** Near Kibbutz Shizafon. Wadis in gravel plain, 35°02'05"E-30°03'00"N. 430 m. 29.03.1989, 29.005.

***Lasiopogon muscoides* (Desf.) DC., Prodr. 6: 246 (1838)**

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.007; **Southern Negev:** Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.019.

***Lathyrus aphaca* L., Sp. Pl.: 729 (1753)**

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.034; **Judean Desert:** near Mishor Adumim. Stony slopes with nari

crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.070.

Lathyrus blepharicarpos Boiss., Diagn. Pl. Orient. 9: 126 (1849)

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.052; Mt. Hermon: near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.021.

Lathyrus ciliolatus Rech. fil. in Ark. Bot., ser. 2, 1: 311 (1950)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.082; Samaritan Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.024; Golan: Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.003.

Lathyrus gorgoni Parl. in Giorn. Sci. Sicilia 62: 3 (1838)

Samaritan Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.008; Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.010.

Lathyrus hierosolymitanus Boiss., Diagn. Pl. Orient. 9: 127 (1849)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.042; Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.040; Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.016; Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.009.

Lathyrus inconspicuus L., Sp. Pl.: 730 (1753) [*L. erectus* Lag.]

Samaritan Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.021.

Lathyrus marmoratus Boiss. & Blanche in Boiss. Fl. Orient. 2: 606 (1872)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.036, 03.098; **Philistean Plain:** 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.039; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.033.

Lathyrus ochrus (L.) DC. in Lam. & DC., Fl. Franç. ed. 3, 4: 578 (1805)

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.024.

Lathyrus pseudocicera Pamp. in Nuovo. Giorn. Bot. Ital. ser. 2, 31: 213 (1924)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.072; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.024.

Launaea mucronata (Forsskål) Muschler, Man. Fl. Egypt: 1057 (1912)

Negev Highlands: Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.004; **Southern Negev:** 6 km S of Zihor junction. chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.016.

Launaea nudicaulis (L.) Hooker fil., Fl. Brit. India 3: 516 (1881)

Negev Highlands: Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.003; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.039; **Southern Negev:** 6 km S of Zihor junction. chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.015; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.003.

Launaea tenuiloba (Boiss.) O. Kuntze, Revis. Gen. Pl. 1: 351 (1891)

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.020; **Southern Negev:** Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.031.

Laurus nobilis L., Sp. Pl.: 369 (1753)

Mt. Carmel: Upper Nahal Neshet, 2 km S of Neshet. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.006.

Lavandula coronopifolia Poiret in Lam., Encycl. Suppl. 3: 308 (1813) [*L. stricta* Delile]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.051; Southern Negev: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.029; Southern Negev: Nahal Hyon. Gravels in wadi, 35°00'00"E-30°12'00"N. 310 m. 29.03.1989, 30.001.

Lavatera cretica L., Sp. Pl.: 691 (1753)

Lower Jordan Valley: 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.014; Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.005.

Lecokia cretica (Lam.) DC., Coll. Mém. 5: 67, 75, t. 2, f. L (1829)

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.007.

Lens odemensis Ladizinsky in Notes Roy. Bot. Gard. Edinburgh 43: 489 (1986)

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.001.

Lens orientalis (Boiss.) Smal'g., Fl. Sredn. Juzn. Rossii 1: 297 (1895)

Judean Mts: Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.005; Golan: Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.011; Mt. Hermon: near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.023.

Leontice leontopetalum L., Sp. Pl.: 312 (1753)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*,

35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.032; **Negev Highlands:** Nahal Loz and Borot Loz (various habitats), 34°39'30"E-30°30'00"N. 960-1,000 m. 27.03.1989, 20.005.

Leontodon laciniatus (Bertol.) Widder in Beih. Bot. Centrabl. 60 (2): 217 (1939) [*L. arabicus* Boiss.]

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.010; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.017; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.040.

Leopoldia bicolor (Boiss.) Eig & Feinbrun in Palestine J. Bot., Jerusalem Ser., 4: 58 (1947) [*L. maritima* auct.]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.077.

Leopoldia comosa (L.) Parl., Fl. Palerm. 1: 538 (1845)

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.018; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.046.

Leopoldia longipes (Boiss.) Los.-Losinsk. in Komarov Fl. SSSR 4: 510 (1935) [*L. aaronsohnii* (Oppenh. & Beauverd) Feinbrun]

Negev Highlands: 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.019; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.035.

Lepidium sativum L., Sp. Pl.: 644 (1753), subsp. *spinescens* (DC.) Thell. in Vierteljahrsschr. Naturf. Ges. Zürich 51: 160 (1906) [*L. spinescens* DC.]

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.018; **Mt. Hermon:** near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.007.

Lepidium spinosum Ard., Animadv. Bot. Spec. Alt.: 34 (1764)

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.021.

Leptaleum filifolium (Willd.) DC., Syst. Nat. 2: 510 (1821)

Negev Highlands: Nahal Loz and Borot Loz (various habitatas), 34°39'30"E-30°30'00"N. 960-1,000 m. 27.03.1989, 20.010.

Leysera leyseroides (Desf.) Maire in Bull. Soc. Hist. Nat. Afrique N. 20: 186 (1929)
[*Asteropterus leyseroides* (Desf.) Rothm.]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.046; Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.011; Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.048.

Limonium graecum (Poiret) Rech. fil. in Akad. Wiss. Wien, Math.-Naturwiss. Kl., Denkschr. 105(1): 427 (1943) [*Statice graeca* Poiret]

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.029.

Limonium lobatum (L. fil.) Chaz., Suppl. Dict. Jard. 2: 36 (1790) [*L. thouinii* (Viv.) O. Kuntze]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.059; Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.053.

Limonium narbonense Miller, Gard. Dict. ed. 8: *Limonium* N° 2 (1768) [*L. angustifolium* (Tausch) Turrill; *L. meyeri* auct., *L. vulgare* auct.; *Statice limonium* auct.]

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.005.

Limonium pruinosum (L.) Chaz., Suppl. Dict. Jard. 2: 36 (1790)

Negev Highlands: Makhtesh Hazera (Makhtesh Katan). Sandy alluvium. pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.017.

Limonium sinuatum (L.) Miller, Gard. Dict., ed. 8: *Limonium* n° 6 (1768)

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.006.

Linaria albifrons (Sm.) Sprengel, Syst. Veg. 2: 793 (1825)

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.011; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.042.

Linaria chalepensis (L.) Miller, Gard. Dict., ed. 8: *Linaria* n° 12 (1768)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.009; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.015.

Linaria haelava (Forsskål) Delile, Descr. Egypte, Hist. Nat.: 66 (1813)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.058; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.055; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.026; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.025.

Linaria joppensis Bornm. in Verh. K. K. Zool.-Bot. Ges. Wien 48: 612 (1898)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.013.

Linaria tenuis (Viv.) Sprengel, Syst. Veg. 2: 795 (1825) [*L. ascalonica* Boiss. & Kotschy]

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.027.

Linum mucronatum Bertol., Misc. Bot. 1: 18 (1842)

Samarian Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.041.

Linum nodiflorum L., Sp. Pl.: 280 (1753)

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.027; Mt. Carmel: Upper Nahal Neshet, 2 km S of Neshet. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.016.

Linum pubescens Banks & Solander in Russell, Nat. Hist. Aleppo, ed. 2, 2: 268 (1794)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.069; Samarian Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.038; Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.062.

Linum strictum L., Sp. Pl.: 279 (1753)

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.041.

Lithospermum arvense L., Sp. Pl.: 132 (1753) [*Buglossoides arvensis* (L.) I. M. Johnston]

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.022.

Lithospermum incrassatum Guss., Fl. Sicul. Prodr. 1: 211 (1827) [*Buglossoides incrassata* (Guss.) I. M. Johnston]

Samarian Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.064; **Mt. Hermon:** lower teliferique. Slopes of hard karstic Jurassic limestones, 35°46'20"E-33°17'30"N. 1690 m. 4.4.89, 49.006.

Lithospermum tenuiflorum L. fil., Suppl. Pl.: 130 (1782) [*Buglossoides tenuiflora* (L. fil.) I. M. Johnston]

Judean Mts: Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.033; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.002; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.013.

Lolium persicum Boiss. & Hohen. in Boiss., Diagn. Pl. Orient. 13: 66 (1854)

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.030.

Lolium rigidum Gaudin, Agrost. Helv. 1: 334 (1811)

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.043; **Kinnrot Valley (Upper Jordan Valley):** near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.042; **Coastal Galilee:** coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.032; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.038.

Lomelosia palaestina (L.) Rafin., Fl. Tellur. 4: 95 (1838) [*Scabiosa palaestina* L.]

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.046.

Lomelosia porphyroneura (Blakelock) Greuter & Burdet in Willdenowia 15: 75 (1985) [*Scabiosa porphyroneura* Blakelock; *S. aucheri* auct.]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.044; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.022; **Negev Highlands:** 2 km NW

of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.054; Negev Highlands: Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.021.

Lomelosia prolifera (L.) Greuter & Burdet in Willdenowia 15: 75 (1985) [*Scabiosa prolifera* L.]

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.047.

Lonicera etrusca G. Santi, Viagg. Montam. 1: 113 (1785)

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.013.

Loranthus acaciae Zucc. in Abh. Math.-Phys. Cl. Königl. Bayer. Akad. Wiss. 3: 249 (1840)

Arava Valley: Yotvata. Disturbed ground and wadis, 35°03'30"E-29°59'10"N. 100 m. 29.03.1989, 31.011.

Lotononis platycarpa (Viv.) Pichi-Serm. in Webbia 7: 331 (1950) [*L. dichotoma* Boiss.]

Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.032.

Lotus collinus (Boiss.) Heldr., Herb. Graec. Norm.: n° 1320 (1897) [*L. judaicus* Bornm.]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.036; Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.036.

Lotus conimbricensis Brot., Phytogr. Lusit. Select.: 59 (1800)

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.028.

Lotus conjugatus L., Sp. Pl.: 774 (1753), subsp. *requienii* (Sanguinetti) Greuter in Willdenowia 16: 112 (1986) [*Tetragonolobus requienii* (Sanguinetti) Sanguinetti]

Golan: 5 km E of Almagor. Pseudosavanna of *Ziziphus spina-christi* accompanied by annuals; protogrumusol on basalt, 35°39'30"E-32°54'30"N. (-)40 m. 3.4.89, 42.006.

Lotus creticus L., Sp. Pl.: 775 (1753)

Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.015.

Lotus edulis L., Sp. Pl.: 774 (1753)

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.018.

Lotus glaber Miller, Gard. Dict., ed. 8: *Lotus* n° 3 (1768) [*L. tenuis* Willd.]

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.004.

Lotus halophilus Boiss. & Spruner in Boiss., Diagn. Pl. Orient. 2: 37 (1843) [*L. villosus* Forsskål (non Burm. fil.)]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.093; Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.033; Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.037.

Lotus lanuginosus Vent., Jard. Malmaison: 92 (1805)

Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.016.

Lotus ornithopodioides L., Sp. Pl.: 775 (1753)

Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.018.

Lotus palaestinus (Boiss. & Blanche) Blatter in Rec. Bot. Surv. India 8: 141 (1921)
[*Tetragonolobus palaestinus* Boiss. & Blanche]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.041; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.089; **Samaritan Desert:** near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.013.

Lotus peregrinus L., Sp. Pl.: 774 (1753)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.061; **Dead Sea Valley:** near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.035; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.024; **Judean Mts:** Kiryat Anavim, 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.014; **Bet-Shean Valley:** 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.008; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.069; **Coastal Galilee:** coast of Rosh Hanigra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.017.

Lupinus angustifolius L., Sp. Pl.: 721 (1753)

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.005.

Lupinus pilosus L., Syst. Veg., ed. 13: 545 (1774) [*L. varius* auct.]

Golan: Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.010.

Lycium europaeum L., Sp. Pl.: 192 (1753)

Lower Jordan Valley: 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.008.

Lycium schweinfurthii Dammer in Bot. Jahrb. Syst. 48: 224 (1912)

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noacetum mucronatae, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.002.

Lycium shawii Roemer & Schultes, Syst. Veg. 4: 693 (1819) [*L. arabicum* Boiss.]

Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.043.

Malcolmia africana (L.) R. Br. in Aiton, Hort. Kew., ed. 2, 4: 121 (1812)

Negev Highlands: Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.002; Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.038; Negev Highlands: 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.007.

Malcolmia chia (L.) DC., Syst. Nat. 2: 440 (1821)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.029; Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.023; Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.013.

Malva aegyptia L., Sp. Pl.: 690 (1753)

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.045.

Malva nicaeensis All., Fl. Pedem. 2: 40 (1785)

Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.001.

Malva parviflora L., Demonstr. Pl.: 18 (1753)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.040; Bet-Shean Valley: 6 km SSW of

Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.026.

Malva sylvestris L., Sp. Pl.: 689 (1753)

Negev Highlands: Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.007; Negev Highlands: 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.001.

Malvella sherardiana (L.) Jaub. & Spach, Ill. Pl. Orient. 5: 47, t. 444 (1855)

Samarian Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.027.

Mandragora autumnalis Bertol., Elench. Pl. Hort. Bot. Bonon. 6 (1820) [*M. officinarum* auct.]

Mt. Carmel: Upper Nahal Neshet, 2 km S of Neshet. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.014.

Maresia pulchella (DC.) O. E. Schulz in Engler, Pflanzenr. 86: 211 (1924)
[*Malcolmia pulchella* (DC.) Boiss.]

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.005; Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"E-31°34'20"N, 70 m. 21.03.1989, 03.029.

The three species of *Maresia* growing in Israel are confined to sandy soils. We did not follow Greuter & al. (Med-Checklist 1: 139. 1984) in including *Maresia pulchella* in the genus *Malcolmia*.

A. DANIN

Matricaria aurea (Loefl.) Schultz Bip. in Bonplandia 8: 369 (1860)

Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.038; Negev Highlands: 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.040.

Matthiola aspera Boiss., Diagn. Pl. Orient. 8: 16 (1849)

Dead Sea Valley: near Ormat's solar ponds, 2 km N of the Dead Sea northern coast. Salty soil in wadis, 35°30'31"E-31°48'10"N, (-)370 m. 22.03.1989, 07.008; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.005.

Matthiola livida (Delile) DC., Syst. Nat. 2: 174 (1821) [*M. longipetala* subsp. *livida* (Delile) Maire]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.026; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.052; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.017; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.039; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.003; **Southern Negev:** 6 km S of Zihor junction. chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.012; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.032.

Matthiola tricuspidata (L.) R. Br. in Aiton, Hort. Kew., ed. 2, 4: 120 (1812)

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.022.

Medicago blanchiana Boiss., Diagn. Pl. Orient., ser. 2, 5: 75 (1856)

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.002; 44.018; **Golan:** Yahudiya forest. Park forest of *Quercus ithaburensis* on basalt, 35°40'30"E-32°55'25"N. 40-50 m. 3.4.89, 45.005.

Medicago coronata (L.) Bartal., Cat. Piante Siena: 61 (1776)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.055; **Samarian Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.016; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.044; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.074; **Kinnrot**

Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.020.

Medicago granadensis Willd., Enum. Pl. Hort. Berol.: 803 (1809)

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.007, 44.036.

Medicago laciniata (L.) Miller, Gard. Dict., ed. 8: *Medicago* n° 5 (1768)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.030; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.030; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.028; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.011.

Medicago littoralis Loisel., Not. Pl. France: 118 (1810)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.089; **Coastal Galilee:** coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.019.

Medicago marina L., Sp. Pl.: 779 (1753)

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.004.

Medicago minima (L.) L., Fl. Angl.: 21 (1754)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.090; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.072.

Medicago orbicularis (L.) Bartal., Cat. Piante Siena: 60 (1776)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.037; **Philistean Plain:** 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989,

04.038; Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.035.

***Medicago polymorpha* L., Sp. Pl.: 779 (1753) [*M. hispida* Gaertner]**

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.046; **Philistine Plain:** 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.031; **Judean Mts:** Jerusalem. near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.018; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.022; **Kinnrot Valley (Upper Jordan Valley):** near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.019; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.033.

***Medicago rigidula* (L.) All., Fl. Pedem. 1: 316 (1785)**

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.019.

***Medicago rotata* Boiss., Diagn. Pl. Orient. 2: 24 (1843)**

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.083; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.014; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.073; **Golan:** 5 km E of Almagor. Pseudosavanna of *Ziziphus spina-christi* accompanied by annuals; protogrumusol on basalt, 35°39'30"E-32°54'30"N. (-)40 m. 3.4.89, 42.009; **Golan:** near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.004; 44.019.

***Medicago scutellata* (L.) Miller, Gard. Dict., ed. 8: *Medicago* n° 2 (1768)**

Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.024.

Medicago truncatula Gaertner, Fruct. Sem. Pl. 2: 350 (1791)

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.040; Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.064; Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.046.

Medicago turbinata (L.) All., Fl. Pedem. 1: 315 (1785)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.045.

Melilotus indicus (L.) All., Fl. Pedem. 1: 308 (1785)

Lower Jordan Valley: 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.012; Negev Highlands: Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.008.

Melilotus sulcatus Desf., Fl. Atlant. 2: 193 (1799)

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.029.

Mercurialis annua L., Sp. Pl.: 1035 (1753)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.038.

Mericarpaea vaillantoides Boiss., Diagn. Pl. Orient. 3: 52 (1843)

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.062.

Mesembryanthemum nodiflorum L., Sp. Pl.: 480 (1753)

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.056.

Micromeria nervosa (Desf.) Benth. Lab. Gen. Sp.: 376 (1834) [*Satureja nervosa* Desf.]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.059; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00", 770 m. 24.03.1989, 13.041; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.050; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.017.

Micromeria sinaica Benth. Lab. Gen. Sp.: 380 (1834) [*Satureja sinaica* (Benth.) Briq.]

Negev Highlands: 5 km SW of Yerokham. Loessial soil and near outcrops of smooth-faced limestone, 34°53'40"E-31°58'00"N. 500 m. 27.03.1989, 23.005.

Minuartia decipiens (Fenzl) Bornm., Beih. Bot. Centralbl. 31 (2): 193 (1914)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.028; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.005; 39.019; **Upper Galilee:** Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.005.

Minuartia hybrida (Vill.) Šiškin in Komarov, Fl. SSSR 6: 488 (1936) [*Minuartia tenuifolia* (L.) Hiern (non Martius)]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.023; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.040; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.021; **Golan:** Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.005.

Minuartia mediterranea (Link) K. Malý in Glasn. Zemaljsk. Muz. Bosni Hercegovini 20: 363 (1908)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia*

lentiscus association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.024; **Philistean Plain**: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydothymetum capitati*, 34°34'34"E-31°34'20"N, 70 m. 21.03.1989, 03.031.

Minuartia picta (Sm.) Bornm. in Beih. Bot. Centralbl. 28 (2): 148 (1911)

Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.014; **Negev Highlands**: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.028; **Negev Highlands**: 5 km SW of Yerokham. Loessial soil and near outcrops of smooth-faced limestone, 34°53'40"E-31°58'00"N. 500 m. 27.03.1989, 23.007.

Minuartia sinaica (Boiss.) Danin in Israel J. Bot. 36: 63-71 (1987)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.018.

Moenchia erecta (L.) P. Gaertner & al., Ökon. Fl. Wetterau 1: 219 (1799), subsp. *octandra* (Moris) Coutinho, Fl. Portugal: 211 (1913) [*M. octandra* Reichenb.]

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.029.

Morettia canescens Boiss., Diagn. Pl. Orient. 8: 17 (1849)

Southern Negev: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.006.

Moricandia nitens (Viv.) E. A. Durand & Barratte, Fl. Libyc. Prodr.: 15 (1910)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.041; **Southern Negev**: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.059; **Southern Negev**: 6 km S of Zihor junction. chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.019.

Muscari commutatum Guss., Pl. Rar.: 145 (1826)

Judean Mts: Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.036.

Myosotis ramosissima Rochel in Schultes, Österr. Fl. ed. 2, 1: 366 (1814)

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.026.

Myosotis refracta Boiss., Voy. Bot. Espagne 2: 433 (1841)

Mt. Hermon: lower teliferique. Slopes of hard karstic Jurassic limestones, 35°46'20"E-33°17'30"N. 1690 m. 4.4.89, 49.013.

Nasturtiopsis coronopifolia (Desf.) Boiss., Fl. Orient. 1: 237 (1867), subsp. *arabica* (Boiss.) Greuter & Burdet in Willdenowia 13: 94 (1983) [*N. arabica* Boiss.]

Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.013; **Southern Negev:** Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.024.

Nasturtium officinale R. Br. in Aiton, Hort. Kew., ed. 2, 4: 110 (1812)

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.020.

Neotorularia torulosa (Desf.) Hedge & Léonard in Bull. Jard. Bot. Natl. Belgique 56: 389-395 (1986) [*Torularia torulosa* (Desf.) O. E. Schulz]

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.006; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.013; **Negev Highlands:** Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.016; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.031; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.037; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.012.

Neslia apiculata Fischer & al., Index Sem. Hort. Petrop. 8: 68 (1842) [*Vogelia apiculata* (Fischer & al.) Vierh.]

Lower Galilee: 1 km N of Nazareth. Cultivated rendzina on Senonian chalk, 35°19'00"E-32°44'00"N. 400 m. 6.4.89, 55.001.

Neurada procumbens L., Sp. Pl.: 441 (1753)

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaeetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.029;
Negev Highlands: Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"N. 330 m. 30.03.1989, 34.005; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.020.

Nigella ciliaris DC., Syst. Nat. 1: 327 (1817)

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.011; **Upper Galilee:** Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.022.

Noaea mucronata (Forsskål) Ascherson & Schweinf. in Mém. Inst. Egypt. 2: 131 (1887)

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaeetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.064.

Nonea obtusifolia (Willd.) DC. in Lam. & DC., Fl. Franç., ed. 3, 3: 626 (1805)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.083; **Judean Mts:** Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.037; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.008.

Nonea philistaea Boiss., Diagn. Pl. Orient. 11: 96 (1849)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.089; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.091; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.028.

Nonea ventricosa (Sm.) Griseb., Spicil. Fl. Rumel. 2: 93 (1844)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.090.

Notobasis syriaca (L.) Cass. in Cuzier, Dict. Sci. Nat. 35: 177 (1825)

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.019.

Notoceras bicornis (Aiton) Amo, Fl. Fan. Penins. Ibér. 6: 536 (1873)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.032; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.025.

Ochradenus baccatus Delile, Descr. Egypte, Hist. Nat.: 63 (1813)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.002; **Southern Negev:** 6 km S of Zihor junction. chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.020; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.035.

Ochthodium aegyptiacum (L.) DC., Syst. Nat. 2: 423 (1821)

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.015.

Oenanthe silaifolia MB., Fl. Taur.-Caucas. 3: 232 (1820) [*O. media* Griseb.]

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.006; **Golan:** near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.039.

Oligomeris linifolia (Hornem.) Macbride in Contr. Gray Herb. ser. 2, 53: 13 (1918)
[*O. subulata* (Delile) Boiss.]

Negev Highlands: Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.015.

Onobrychis caput-galli Lam., Fl. Franç., 2: 651 (1779)

Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.021.

***Onobrychis crista-galli* (L.) Lam., Fl. Franç., 2: 652 (1778)**

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.085; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.027; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.034; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.033; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.030; **Kinnrot Valley (Upper Jordan Valley):** near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.033.

***Onobrychis ptolemaica* (Delile) DC., Prodr. 2: 347 (1825)**

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.027.

***Onobrychis squarrosa* Viv., Pl. Aegypt. Dec. 4: 14 (1830)**

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.108.

***Ononis alopecuroides* L., Sp. Pl.: 717 (1753), subsp. *exalopecuroides* (G. López) Greuter & Burdet in Willdenowia 19: 33 (1989) [*O. alopecuroides* auct.]**

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.016.

***Ononis hirta* Poiret in Lam., Encycl. Suppl. 1: 741 (1811)**

Golan: 5 km E of Almagor. Pseudosavanna of *Ziziphus spina-christi* accompanied by annuals; protogrumusol on basalt, 35°39'30"E-32°54'30"N. (-)40 m. 3.4.89, 42.007.

***Ononis mitissima* L., Sp. Pl.: 717 (1753)**

Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.031.

Ononis mollis Savi in Mem. Mat. Fis. Soc. Ital. 9: 351, t. 8 (1802) [*O. reclinata* auct.]

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.026; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.030; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.020; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.069; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.032.

This taxon has been often considered as a mere synonym of *O. reclinata* L. (see Huber-Morath in Davis, Fl. Turkey 3: 378. 1970; Greuter & al., Med-Checklist 4: 163. 1989), or even ignored (Ivimey-Cook in Tutin & al., Fl. Eur. 2: 143-152. 1968). However, several authors, such as Dinsmore (in Post, Fl. Syria, ed. 2, 1: 308. 1932) and Zohary (Fl. Palaest. 2: 119. 1972) have recognised it as a variety of *O. reclinata*. In *O. mollis* the corolla is always shorter than the calyx and the leaflets are oblong to linear-cuneate, whereas in *O. reclinata* the corolla is longer than the calyx and the leaflets are wider, from obovate to suborbicular. The pods are short (4-8 mm) and usually included in the calyx in *O. mollis* but longer (6-14 mm) and often exceeding the calyx in *O. reclinata*. The seeds are also smaller in *O. mollis* than in *O. reclinata*. Consequently, *O. mollis* must be distinguished at species level as has correctly been done by Devesa (in Valdés & al., Fl. Andalucía Occid. 2: 149. 1987). *O. mollis* is not restricted to the E. Mediterranean as explicitly indicated by Huber-Morath (in Davis, Fl. Turkey 3: 378. 1970), but occurs all around the Mediterranean.

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Ononis natrix L., Sp. Pl.: 717 (1753), subsp. *natrix*

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.084.

Ononis natrix L., Sp. Pl.: 717 (1753), subsp. *stenophylla* (Boiss.) Širj. in Beih. Bot. Centralbl. 49 (2): 470 (1932)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.104.

Ononis ornithopodioides L., Sp. Pl.: 718 (1753)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.054; **Philistean**

Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydorymyetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.062;
Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.043;
Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.007.

Ononis pubescens L., Mant. Pl.: 267 (1771)

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.040.

Ononis reclinata L., Sp. Pl., ed. 2: 1011 (1763)

Negev Highlands: 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.022.

Ononis serrata Forsskål, Fl. Aegypt.-Arab.: 130 (1775) [incl. *O. diffusa* Ten.]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydorymyetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.096; **Philistean Plain:** 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.012.

Ononis sicula Guss., Cat. Pl. Hort. Boccadifalco: 78 (1821)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.068; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.028; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.049; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.022.

Ononis spinosa L., Sp. Pl.: 716 (1753), subsp. *antiquorum* (L.) Arcangeli, Comp. Fl. Ital.: 157 (1882) [*O. antiquorum* L.; incl. *O. leiosperma* Boiss.]

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.041.

Ononis viscosa L., Sp. Pl.: 718 (1753) subsp. *breviflora* (DC.) Nyman, Consp. Fl. Eur.: 161 (1878)

Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.030.

Onopordum blancheanum (Eig) Danin in Israel J. Bot. 37: 57 (1988)

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.045.

Onopordum palaestinum Eig in Palestine J. Bot., Jerusalem Ser., 2: 191 (1942)

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.043.

Onosma frutescens Lam., Tabl. Encycl. 1: 407 (1792)

Mt. Hermon: 2 km NW of Majdal Shams. Crevices of hard limestone, 1335 m. 4.4.89, 50.001.

Ophrys lutea (Gouan) Cav., Icon. 2: 46 (1793)

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.011.

Ophrys umbilicata Desf. in Mém. Mus. Hist. Nat. 10: 227, t. 15 (1807) [*O. carmeli* Fleischm. & Bornm.; *O. dinsmorei* Schlechter]

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.012.

Orchis galilaea (Bornm. & M. Schulze) Schlechter in Repert. Spec. Nov. Regni Veg. 19: 57 (1923)

Judean Mts: Jerusalem. near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'E-31°45'15"N, 780 m. 24.03.1989, 12.047.

Orchis papilionacea L., Syst. Nat., ed. 10: 1242 (1759)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.095; **Judean Mts:** Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.048; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.045.

The obovate and smaller labellum (of n° 13.045) distinguishes this gathering as *Orchis papilionacea* var. *rubra* (Murray) Brot. from typical *O. papilionacea* L. B. VALDÉS

Origanum ramonense Danin in Israel J. Bot. 16: 101 (1967)

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.009.

Origanum syriacum L., Sp. Pl.: 590 (1753) [*Majorana syriaca* (L.) Kostel.]

Judean Mts: Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.021.

Orlaya daucooides (L.) Greuter in Boissiera 13: 92 (1967) [*O. platycarpus* Koch]

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.033.

Ornithogalum arabicum L., Sp. Pl.: 307 (1753)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.101; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.044.

Ornithogalum fuscescens Boiss. & Gaill. in Boiss. Diagn. Pl. Orient., ser. 2, 4: 107 (1895)

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.029.

***Ornithogalum narbonense* L., Cent. Pl. 2: 15 (1756)**

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.018; **Golan:** near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.020.

***Ornithogalum neurostegium* Boiss., Fl. Orient. 5: 222 (1882)**

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.099; 02.100; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.037; **Golan:** Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.005; **Samaritan Desert:** near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.097; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.003.

***Ornithogalum trichophyllum* Boiss. & Heldr. in Boiss., Diagn. Pl. Orient., ser. 2, 4: 108 (1859)**

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.044.

***Orobancha aegyptiaca* Pers., Syn. Pl. 2: 181 (1806)**

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.006; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.060.

***Orobancha mutelii* F. W. Schultz in Mutel, Fl. Franç., 2: 353 (1835)**

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.024; **Mt. Carmel:** Upper Nahal Nesher, 2 km S of Nesher. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.019.

***Pancratium sickenbergeri* C. Barbey & Barbey, Herb. Levant.: 158 (1882)**

Negev Highlands: Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"N. 330 m. 30.03.1989, 34.014.

Papaver carmeli Feinbrun in Israel J. Bot. 12: 83 (1963)

Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.035.

Papaver aff. *carmeli* Feinbrun

Mt. Carmel: Upper Nahal Neshet, 2 km S of Neshet. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.020; **Coastal Galilee:** coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.031.

Papaver humile Fedde in Bull. Herb. Boissier, ser. 2, 5: 446 (1905)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.046.

Papaver hybridum L., Sp. Pl.: 506 (1753)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.034; **Negev Highlands:** 5 km SW of Yerokham. Loessial soil and near outcrops of smooth-faced limestone, 34°53'40"E-31°58'00"N. 500 m. 27.03.1989, 23.006.

Papaver umbonatum Boiss., Diagn. Pl. Orient. 8: 11 (1849) [*P. subpiriforme* Fedde]

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.001; **Esdraelon Valley:** near Yoqneam. deep clayey soil near the road, 35°06'10"E-32°39'45"N. 40 m. 6.4.89, 56.001.

Paracaryum rugulosum (DC.) Boiss., Diagn. Pl. Orient. 11: 129 (1849)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.049; **Southern Negev:** Near Kibbutz Shizafon. Wadis in gravel plain, 35°02'05"E-30°03'00"N. 430 m. 29.03.1989, 29.006.

Parapholis incurva (L.) C. E. Hubbard in Blumea, Suppl. 3: 14 (1946) [*Pholiurus incurvus* (L.) Schinz & Thell.]

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89,

38.038; Lower Jordan Valley: 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.021; Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.040; Negev Highlands: Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.009; Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.037.

Parentucellia flaviflora (Boiss.) Nevski in Trudy Bot. Inst. Akad. Nauk SSSR, Ser. 1, Fl. Sist. Vyss. Rast., 4: 321 (1937) [*P. latifolia* auct.]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.018; Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.060; Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.065.

Parietaria alsinifolia Delile, Descr. Egypte, Hist. Nat.: 137 (1813)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.042; Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.007; Southern Negev: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.026; Negev Highlands: Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.002.

Parietaria judaica L., Fl. Palaest.: 32 (1756) [*P. diffusa* Mert. & Koch]

Judean Mts: Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.028.

Parietaria lusitanica L., Sp. Pl.: 1052 (1753)

Judean Mts: Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.004; Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.028.

Paronychia arabica (L.) DC. in Lam., Encycl. 5: 24 (1804), subsp. *arabica* [*P. desertorum* Boiss.; *P. lenticulata* Ascherson & Schweinf.]

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.005; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.006; **Southern Negev:** Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.005.

Plants collected in Nahal Paran (n° 27.005) do not agree with the description of Zohary (Fl. Palaest. 1: 132. 1966) where this taxon is considered an annual with very long setae on the apex of sepals. The Nahal Paran plants are perennial with short setae, as indicated by Chaudhri (in Davis, Fl. Turkey 2: 253. 1967) for *P. arabica* subsp. *arabica* and by Maire (Fl. Afrique N. 9: 22. 1963) for *P. arabica* subsp. *lenticulata* Maire & Weiller.

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Paronychia argentea Lam., Fl. Franç. 3: 230 (1779)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.022; **Samaritan Desert:** near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.035; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.016; **Mt. Hermon:** near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.013.

Paronychia capitata (L.) Lam., Fl. Franç. 3: 229 (1779)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.021; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.037; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.029; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N, 300 m. 26.03.1989, 15.059; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.010; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.034; 21.062.

Paronychia sinaica Fresen. in Mus. Senckenberg. 1: 180 (1834)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.030; Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.053.

Peganum harmala L., Sp. Pl.: 444 (1753)

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.063.

Peltaria angustifolia DC., Syst. Nat. 2: 329 (1821)

Golan: Tel Avital. Volcanic ash, 35°48'10"E-33°06'30"N. 1000 m. 4.4.89, 47.001.

Pennisetum asperifolium (Desf.) Kunth, Révis. Gramin.: 49 (1829) [*P. setaceum* auct.]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.017.

Pennisetum ciliare (L.) Link. Hort. Berol. 1: 213 (1827) [*Cenchrus ciliaris* L.]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.015; Negev Highlands: Makhtesh Hathira, Nahal Hathira. Sandy-silty wadi, 35°01'00"E-30°57'03"N. 310 m. 30.03.1989, 33.004; Negev Highlands: Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.026; Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.017.

Pennisetum divisum (J. F. Gmelin) Henrard in Blumea 3: 162 (1939) [*P. dichotomum* Delile]

Negev Highlands: Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.028.

Pergularia tomentosa L., Syst. Nat., ed. 12, 2: 191 (1767) [*Daemia tomentosa* (L.) Pomel]

Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m.

29.03.1989, 26.040; Negev Highlands: Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.013.

Periploca aphylla Decaisne in Jacquem., Voy. Inde 4, Bot.: 109 (1844)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.013.

Phagnalon barbeyanum Ascherson & Schweinf. in Mem. Inst. Egypt. 2: 87 (1887)

Negev Highlands: Makhtesh Hathira, Nahal Hathira. Sandy-silty wadi, 35°01'00"E-30°57'03"N. 310 m. 30.03.1989, 33.002.

Phagnalon rupestre (L.) DC., Prodr. 5: 396 (1836)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.026; Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.020.

Phalaris minor Retz., Obs. Bot. 3: 8 (1783)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.008; Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-) 270 m. 23.03.1989, 09.044; Negev Highlands: 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.033; Southern Negev: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.020.

Phalaris paradoxa L., Sp. Pl.: ed. 2: 1665 (1763)

Samarian Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.049; Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.040.

Phillyrea latifolia L., Sp. Pl.: 8 (1753), subsp. *daninii* Valdés, subsp. nov. [*P. latifolia* subsp. *orientalis* Sébastian in Trav. Inst. Sci. Chérifien, Sér. Bot., 6: 84 (1956), nom. inval.]

Fruticosa vel arborescens, foliis oblongo-ellipticis, obovatis vel ellipticis, dentato-serratis integerrimisve, cuneatis, breviter petiolatis; drupis 4-5 mm.

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.057 (holotypus, SEV); **Upper Galilee:** Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.003.

The plants from Israel (n° 02.057 & 53.003) clearly differ from those from the Iberian Peninsula and other areas of the W Mediterranean. The leaves are smaller (9-27 x 5-12 mm in the material from those locations), with cuneate limb, and the drupes are described as being 4-5 mm in diameter (Dinsmore in Post, ed. 2, Fl. Syria, 2: 183. 1933; Feinbrun-Dothan, Fl. Palaest. 3: 15. 1978). In typical *P. latifolia* from the W Mediterranean the leaves are larger, usually with a truncate or cordate base, and the drupes are also bigger (6-10 mm). Although most authors (e. g. Dinsmore [l.c.]; Feinbrun-Dothan [l.c.]; Yaltirik [in Davis, Fl. Turkey 6: 157-158. 1978]; Greuter & al. [Med-Checklist 4: 249. 1989]) do not separate the E Mediterranean plants as a distinct taxon, the plants which share these characters deserve recognition at subspecific level as proposed by Sébastien (l.c.) under the name *P. latifolia* subsp. *orientalis*. However, she did not include a Latin description of this subspecies, which makes her name invalid, and she selected as type a sheet from Montpellier with two specimens (Sébastien, l.c.: 84 and photograph) B. VALDÉS

Phleum subulatum (Savi) Ascherson & Graebner, Syn. Mitteleur. Fl. 2(1): 154 (1899)

Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.036.

Phragmites australis (Cav.) Steudel, Nomencl. Bot., ed. 2, 2: 324 (1841) [*P. communis* Trin.]

Negev Highlands: Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.024.

Picris amalecitana (Boiss.) Eig in Palestine J. Bot., Jerusalem Ser., 1: 70 (1938) [*P. intermedia* Eig]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.001; 03.014; 03.022 p. p. (HUJ); **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.081; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.012.

Picris asplenioides L., Sp. Pl.: 793 (1753) [*P. radicata* (Forsskål) Less.]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989,

03.022 p. p. (B); Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaeetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.019; Negev Highlands: 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.043; Negev Highlands: Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"N. 330 m. 30.03.1989, 34.010.

Picris galilaea (Boiss.) Eig in Palestine J. Bot., Jerusalem Ser., 1: 69 (1938)

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.018.

As pointed out earlier (Lack, Rev. Orient. Sp. *Picris*, 1975; and in Davis, Fl. Turkey 5: 678-684. 1975), *Picris amalecitana* and *P. galilaea*, considered already by Eig (in Palestine J. Bot., Jerusalem Ser., 1: 65-79. 1939) to constitute "a natural series of species with gradual transition", are best regarded as a single, variable taxon. H. W. LACK

Pimpinella cretica Poiret in Lam., Encycl. Suppl. 1: 684 (1811)

Philistine Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.016; Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.011; Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.052.

Piptatherum blancheanum Boiss., Diagn. Pl. Orient., ser. 2, 4: 127 (1859)

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.015; Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.038.

Piptatherum miliaceum (L.) Cosson, Not. Pl. Crit.: 129 (1851) [*Oryzopsis miliacea* (L.) Ascherson & Schweinf.]

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.016; Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.031; Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.033.

Pistacia atlantica Desf., Fl. Atlant. 2: 364 (1799)

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.003.

***Pistacia lentiscus* L., Sp. Pl.: 1026 (1753)**

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.068.

***Pistacia palaestina* Boiss., Diagn. Pl. Orient. 9: 1 (1849)**

Judean Mts: Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.010.

***Pisum fulvum* Sm., Fl. Graec. Prodr. 2: 62 (1813)**

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.038; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.022; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.023; **Golan:** Yahudiya forest. Park forest of *Quercus ithaburensis* on basalt, 35°40'30"E-32°55'25"N. 40-50 m. 3.4.89, 45.003.

***Pituranthos tortuosus* (Desf.) Ascherson & Schweinf. in Mém. Inst. Egypt. 2: 80 (1887) [*Deverra tortuosa* (Desf.) DC.]**

Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.046; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.050; **Arava Valley:** Grofit junction. Large pebbly wadi, 35°04'00"E-29°59'30"N. 150 m. 29.03.1989, 32.003.

***Plantago afra* L., Sp. Pl., ed. 2: 168 (1762) [*P. psyllium* L. (1762) non L. (1753)]**

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.061; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.039; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.030; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.062.

***Plantago albicans* L., Sp. Pl.: 114 (1753)**

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.055.

***Plantago amplexicaulis* Cav., Icon. 2: 22 (1793)**

Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.056; **Southern Negev:** Near Kibbutz Shizafon. Wadis in gravel plain, 35°02'05"E-30°03'00"N. 430 m. 29.03.1989, 29.002; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.012.

***Plantago bellardii* All., Fl. Pedem. 1: 82 (1785)**

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.037; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.042.

***Plantago coronopus* L., Sp. Pl.: 115 (1753)**

Dead Sea Valley: near Ormat's solar ponds, 2 km N of the Dead Sea northern coast. Salty soil in wadis, 35°30'31"E-31°48'10"N, (-)370 m. 22.03.1989, 07.004; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.052; **Lower Jordan Valley:** 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.005; 10.022; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.008; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.002; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.033; **Bet-Shean Valley:** 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.002; **Coastal Galilee:** coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.014; **Philistean Plain:** 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.027.

***Plantago cretica* L., Sp. Pl.: 114 (1753)**

Samarian Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989,

08.077; Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.027; Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.031.

Plantago cylindrica Forsskål, Fl. Aegypt.-Arab.: 31 (1775)

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.007.

Plantago lagopus L., Sp. Pl.: 114 (1753)

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.068; Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.016.

Plantago lanceolata L., Sp. Pl.: 113 (1753)

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.008.

Plantago notata Lag., Gen. Sp. Pl.: 7 (1816)

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.058; Negev Highlands: 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.038.

Plantago ovata Forsskål, Fl. Aegypt.-Arab.: 31 (1775)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.066; Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.040; Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.014; Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.012; Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.052; Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.054; 26.064; Arava Valley: Yotvata. Disturbed ground and wadis, 35°03'30"E-29°59'10"N. 100 m. 29.03.1989, 31.013; Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.010.

Plantago phaeostoma Boiss. & Heldr. in Boiss., Diagn. Pl. Orient., ser. 2, 4: 71 (1859)

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.006.

Plantago sarcophylla Zohary in Palestine J. Bot., Jerusalem Ser., 1: 230 (1938)

Philistine Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"E-31°34'20"N, 70 m. 21.03.1989, 03.011; Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.007.

Poa bulbosa L., Sp. Pl.: 70 (1753)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.102; Judean Mts: Jerusalem. near Ora. Terraces on marly-chalk with poor vegetation of *Coridolithum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.041; 12.043; Mt. Carmel: Upper Nahal Neshet, 2 km S of Neshet. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.018.

Poa eigii Feinbrun in Bull. Misc. Inform. 1940: 280, t. 7 f. 3 (1940)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.006; Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.051.

Poa infirma Kunth in Humboldt & al., Nov. Gen. Sp. 1: 158 (1816) [*P. exilis* (Tomm.) Murb.]

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.037.

Poa sinaica Steudel, Syn. Pl. Glumac. 1: 256 (1854)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.055; Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989,

21.005; Negev Highlands: 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.034; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.051.

***Podonosma orientalis* (L.)** Feinbrun in Israel J. Bot. 25: 80 (1976) [*P. syriaca* (Labill.) Boiss.]

Samarian Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.096; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.022; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.022; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.043.

***Polycarphaeae robbaireae* (O. Kuntze)** Greuter & Burdet in Willdenowia 12: 189 (1982) [*Robbaireae delileana* Milne-Redh.; *Robbaireae prostrata* auct.]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.070; **Southern Negev:** Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.025; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.018.

***Polycarpon succulentum* (Delile)** J. Gay in Rev. Bot. Recueil Mens. 2: 372 (1847)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.063; **Philistean Plain:** 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.015; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noaetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.040.

***Polygala monspeliaca* L., Sp. Pl.: 702 (1753)**

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.017; **Mt. Hermon:** near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.020.

Polygonum argyrocoleum G. Kunze in Linnæa 20: 17 (1847)

Lower Jordan Valley: 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.010.

Polygonum equisetiforme Sm., Fl. Graec. Prodr. 1: 266 (1809)

Phillistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.013.

Polygonum setosum Jacq., Observ. Bot. 3: 8 (1768)

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.009.

Prangos ferulacea (L.) Lindley in Quart. J. Sci. Lit. Arts 19: 7 (1825) [*Cachrys ferulacea* (L.) Calestani; *Prangos goniocarpa* (Boiss.) Zohary; see Hermstadt & Heyn in Boissiera 26: 39.1989]

Samaritan Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.031.

Prasium majus L., Sp. Pl.: 601 (1753)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.060; Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.019; Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.011.

Pseuderucaria clavata (Boiss. & Reuter) O. E. Schulz in Bot. Jahrb. Syst. 54, Beibl. 119: 54 (1916)

Negev Highlands: Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.033.

Pseudorlaya pumila (L.) Grande in Nuovo Giorn. Bot. Ital., ser. 2, 32: 86 (1925) [*Orlaya pumila* (L.) Halácsy]

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.028.

Psilurus incurvus (Gouan) Schinz & Thell. in Vierteljahrschr. Naturf. Ges. Zürich 58: 50 (1913)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.093; **Philistine Plain:** 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.053; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.058; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.047.

Psylliostachys spicata (Willd.) Nevski in Trudy Bot. Inst. Akad. Nauk SSSR, Ser. 1, Fl. Sist. Vyss. Rast., 4: 314 (1937) [*Limonium spicatum* (Willd.) O. Kuntze]

Lower Jordan Valley: 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.004.

Pteranthus dichotomus Forsskål, Fl. Aegypt.-Arab.: lxii, 36 (1775)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.008; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.067; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.042; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.014.

Pterocephalus brevis Coulter, Mém. Dipsac.: 32 (1823)

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.042; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.080; **Kinnrot Valley (Upper Jordan Valley):** near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.022; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.034.

Pterogaillonia calycoptera (Decaisne) Linč. in Novosti Sist. Vyss. Rast. 10: 233 (1973) [*Gaillonia calycoptera* (Decaisne) Jaub. & Spach]

Arava Valley: Grofit junction. Large pebbly wadi, 35°04'00"E-29°59'30"N. 150 m. 29.03.1989, 32.002.

Pulicaria incisa (Lam.) DC., Prodr. 5: 479 (1836) [*P. desertorum* DC.; *P. undulata* auct.]

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.060; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.009; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.010; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.038.

Pyrus syriaca Boiss., Diagn. Pl. Orient. 10: 1 (1849)

Judean Mts: Jerusalem. near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.032.

Quercus boissieri Reuter in Boiss., Diagn. Pl. Orient. 12: 119 (1853) [*Q. infectoria* Olivier subsp. *veneris* (C. K. Schneider) Meikle]

Mt. Carmel: Upper Nahal Neshet, 2 km S of Neshet. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.003.

Quercus calliprinos Webb, Iter Hispan.: 15 (1838)

Mt. Carmel: Upper Nahal Neshet, 2 km S of Neshet. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.002.

Quercus ithaburensis Decaisne in Ann. Sci. Nat. Bot. ser. 2, 4: 348 (1835)

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.014.

Quidproquo confusum Greuter & Burdet in Willdenowia 13: 94 (1983) [*Raphanus aucheri* O. E. Schulz (non Boiss.)]

Mt. Hermon: near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.018.

Ranunculus aquatilis L., Sp. Pl.: 556 (1753)

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.043; **Upper Galilee:** near Sasa. Muddy soil at the margins of a vernal pool, 35°23'20"E-33°04'15"N. 810 m. 5.4.89, 52.001.

***Ranunculus arvensis* L., Sp. Pl.: 555 (1753)**

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.003.

***Ranunculus asiaticus* L., Sp. Pl.: 552 (1753)**

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.042; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.043; **Mt. Hermon:** near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.002.

***Ranunculus chius* DC., Syst. Nat. 1: 299 (1817)**

Mt. Carmel: Upper Nahal Neshet, 2 km S of Neshet. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.008; **Upper Galilee:** near Sasa. Muddy soil at the margins of a vernal pool, 35°23'20"E-33°04'15"N. 810 m. 5.4.89, 52.004.

***Ranunculus cornutus* DC., Syst. Nat. 1: 300 (1817)**

Upper Galilee: near Sasa. Muddy soil at the margins of a vernal pool, 35°23'20"E-33°04'15"N. 810 m. 5.4.89, 52.003.

***Ranunculus ficaria* L., Sp. Pl.: 550 (1753)**

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.023.

***Ranunculus marginatus* Dum.-Urville in Mém. Soc. Linn. Paris 1: 318 (1822)**

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.008.

***Ranunculus millefolius* Banks & Solander in Russell, Nat. Hist. Aleppo. ed. 2, 2: 254 (1794), subsp. *hierosolymitanus* (Boiss.) P. H. Davis in Notes Roy. Bot. Gard. Edinburgh 23: 150 (1960)**

Samaritan Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.029.

Ranunculus peltatus Schrank, Baier. Fl. 2: 103 (1789), subsp. ***fucooides*** (Freyn) Muñoz Garmendia in Anales Jard. Bot. Madrid 41: 477 (1985) [*R. peltatus* subsp. *saniculifolius* (Viv.) C. Cook; *R. saniculifolius* Viv.]

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.040.

Ranunculus scandicinus (Boiss.) P. H. Davis in Ark. Bot., ser 2, 5: 143 (1960) [*R. marginatus* var. *scandicinus* (Boiss.) Zohary]

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.010.

Ranunculus trichophyllus Chaix, Pl. Vap.: 31 (1785)

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.041.

Raphanus rostratus DC., Syst. Nat. 2: 666 (1821) [*R. pugioniformis* Boiss.]

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.002.

Rapistrum rugosum (L.) All., Fl. Pedem. 1: 257 (1785)

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.036.

Reaumuria hirtella Jaub. & Spach, Ill. Pl. Orient. 3: 54, 55, t. 244 (1848) [*R. palaestina* Boiss.]

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.066; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.040; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.063; **Southern Negev:** 6 km S of Zihor junction. chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.004.

Reichardia tingitana (L.) Roth, Bot. Abh. Beobacht.: 35 (1787) [*R. orientalis* (L.) Ascherson & Schweinf.]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989,

03.017; Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.041; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.008; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.007; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.016.

***Reseda alba* L., Sp. Pl.: 449 (1753)**

Judean Mts: Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.026.

***Reseda boissieri* Müller Arg. in Bot. Zeitung (Berlin) 14: 37 (1856)**

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.073; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.005; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.034.

***Reseda decursiva* Forsskål, Fl. Aegypt.-Arab.: lxvi (1775)**

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.074; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.028.

***Reseda lutea* L., Sp. Pl.: 449 (1753)**

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.030.

***Reseda muricata* C. Presl in Abh. Königl. Böhm. Ges. Wiss., ser. 5, 3: 438 (1845)**

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.026; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.052.

Retama raetam (Forsskål) Webb, Hist. Nat. Iles Canaries 3(2, 2): 56 (1842)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"E-31°34'20"N, 70 m. 21.03.1989, 03.105; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.013.

Rhagadiolus edulis Gaertner, Fruct. Sem. Pl. 2: 354 (1791)

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.030; **Upper Galilee:** Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.008.

Rhagadiolus stellatus (L.) Gaertner, Fruct. Sem. Pl. 2: 354 (1791)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratoniasiliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.007; **Samaritan Desert:** near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.078; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.001.

Rhamnus disperma Boiss., Fl. Orient. Suppl.: 156 (1888)

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.042.

Rhamnus lycioides L., Sp. Pl., ed. 2: 279 (1762), subsp. *graeca* (Boiss. & Reuter) Tutin in Feddes Repert. 74: 26 (1967) [*R. palaestina* Boiss., Diagn. Pl. Orient. ser. 2, 1: 119 (1854)]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratoniasiliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.075; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.048.

Rheum palaestinum Feinbrun in Palestine J. Bot., Jerusalem Ser., 3: 117 (1944)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.028.

Rhus tripartita (Ucria) Grande in Bull. Orto Bot. Regia Univ. Napoli 5: 62 (1918)

Negev Highlands: Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.010.

Ricotia lunaria (L.) DC., Syst. Nat. 2: 284 (1821)

Golan: Yahudiya forest. Park forest of *Quercus ithaburensis* on basalt, 35°40'30"E-32°55'25"N. 40-50 m. 3.4.89, 45.004.

Rochelia disperma (L. fil.) C. Koch in Linnaea 22: 649 (1849)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.062.

Roemeria hybrida (L.) DC., Syst. Nat. 2: 92 (1821)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.028; Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.019; Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.016; 19.029; Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.039; Negev Highlands: 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.035; Negev Highlands: 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.027.

Romulea bulbocodium (L.) Sebast. & Mauri, Fl. Roman. Prodr.: 17 (1818)

Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.030.

Romulea columnae Sebast. & Mauri, Fl. Roman. Prodr.: 18 (1818)

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.006.

Rostraria cristata (L.) Cvelev in Novosti Sist. Vyss. Rast. 7: 47 (1971) [*Koeleria phleoides* (Vill.) Pers.; *Lophochloa cristata* (L.) Hylander]

Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.049; Judean Desert: near Mishor

Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.004; **Samaritan Desert**: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.060; **Lower Jordan Valley**: 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-) 280 m. 23.03.1989, 10.016; **Negev Highlands**: 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.030; **Kinnrot Valley (Upper Jordan Valley)**: 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.020; **Coastal Galilee**: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.039.

Rostraria smyrnacea (Trin.) H. Scholz in Willdenowia 19: 109 (1989) [*Lophochloa berythea* (Boiss. & Blanche) Bor; *Rostraria berythea* (Boiss. & Blanche) Holub]

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.004; **Northern Negev**: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.041.

Rosularia libanotica (Labill.) Muirh. in P. H. Davis, Fl. Turkey 4: 216 (1972) [*Rosularia sempervivum* subsp. *libanotica* (Labill.) Eggli]

Mt. Hermon: lower teliferique. Slopes of hard karstic Jurassic limestones, 35°46'20"E-33°17'30"N. 1690 m. 4.4.89, 49-Ham No. 31100 (HUJ, U). $2n=18$.

According to Eggli (in Bradleya 6, Suppl.: 1-119. 1988) two subspecies of *Rosularia sempervivum* occur in Israel, viz., subsp. *libanotica* (including *R. kesrouanensis* Mouterde) and subsp. *persica* (Boiss.) Eggli. Both are diploid ($x=9$) and morphologically rather variable. The assignment of the specimen is not conclusive. It resembles subsp. *libanotica* most closely in its flat rosettes with spatulate and slightly emarginate leaves entirely and densely glandular-pubescent inflorescences, pale pink, widely funnel-shaped, flowers with reddish veins, and glabrous follicles gradually tapering into the long style (more than 1 mm). On the other hand the almost glabrous leaves with sparsely ciliate or serrulate margins, shortly adnate (1/3) filaments, and broadly quadrate nectary scales indicate an affinity with subsp. *persica*. (H.T HART). [For the purpose of this list we have retained Med-Checklist nomenclature].
A. DANIN

Rubia tenuifolia Dum.-Urville in Mém. Soc. Linn. Paris 1: 273 (1822)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.063; **Mt. Carmel**: Upper Nahal Neshet, 2 km S of Neshet. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.009.

***Rumex bucephalophorus* L., Sp. Pl.: 336 (1753)**

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.040; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.025.

***Rumex cyprius* Murb. in Acta Univ. Lund., ser. 2, 2(14): 20 (1907) [*R. roseus* auct.]**

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.004; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.063; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.003.

***Rumex pictus* Forsskål, Fl. Aegypt.-Arab.: 77 (1775)**

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.011; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.009.

***Rumex pulcher* L., Sp. Pl.: 336 (1753)**

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.007.

***Rumex vesicarius* L., Sp. Pl.: 336 (1753)**

Southern Negev: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.009.

***Sagina apetala* Ard., Animadv. Bot. Specim. Alt.: 22 (1764)**

Golan: Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.014.

***Sagina maritima* G. Don, Herb. Brit.: n° 155 (1810)**

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.003; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.022.

A new record for Israel.

Salix acmophylla Boiss., Diagn. Pl. Orient. 7: 98 (1846)

Kinnrot Valley (Upper Jordan Valley): Jordan River banks, near Arik Bridge. 35°37'00"E-32°54'00"N. (-)200 m. 3.4.89, 41.001; **Golan:** Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.022.

Salsola baryosma (Schultes) Dandy in F. W. Andrews, Fl. Pl. Sudan 1: 111 (1950)
[*S. foetida* Sprengel]

Southern Negev: Nahal Hyon. Gravels in wadi, 35°00'00"E-30°12'00"N. 310 m. 29.03.1989, 30.002; **Arava Valley:** Yotvata. Disturbed ground and wadis, 35°03'30"E-29°59'10"N. 100 m. 29.03.1989, 31.008.

Salsola cyclophylla Baker in Bull. Misc. Inform. 1894: 340 (1894)

Southern Negev: 6 km S of Zihor junction. chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.021; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.014.

Salsola damascena Botč. in Bot. Žurn. (Moskva & Leningrad) 60: 500 (1975) [*S. vermiculata* auct.]

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.036.

Salsola inermis Forsskål, Fl. Aegypt.-Arab.: 57 (1775)

Judean Desert: 5 km SW of Jericho, near St. John's Monastery. Stony slopes, 35°27'55"E-31°50'30"N, (-)10 m. 23.03.1989, 11.003.

Salsola schweinfurthii Solms-Laub. in Bot. Zeitung (Berlin) 59: 173 (1901)

Negev Highlands: Makhtesh Hathira, Nahal Hathira. Sandy-silty wadi, 35°01'00"E-30°57'03"N. 310 m. 30.03.1989, 33.007.

Salsola tetrandra Forsskål, Fl. Aegypt.-Arab.: 58 (1775)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.072.

Salvadora persica L., Sp. Pl.: 122 (1753)

Lower Jordan Valley: 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.015.

***Salvia aegyptiaca* L., Sp. Pl.: 23 (1753)**

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.039; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.033.

***Salvia dominica* L., Sp. Pl.: 25 (1753) [*S. graveolens* Vahl]**

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.053; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.048; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.079.

***Salvia fruticosa* Miller, Gard. Dict., ed. 8: *Salvia* n° 5 (1768) [*S. triloba* L. fil.]**

Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.049; **Mt. Carmel:** Upper Nahal Nesher, 2 km S of Nesher. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.012.

***Salvia hierosolymitana* Boiss., Diagn. Pl. Orient. 12: 61 (1853)**

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.001; **Golan:** near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.037.

***Salvia horminum* L., Sp. Pl.: 24 (1753) [*S. viridis* var. *comata* Heldr.]**

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.008; **Philistean Plain:** 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.044; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.056; 08.070; **Kinnrot Valley (Upper Jordan Valley):** near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.008.

Salvia judaica Boiss., Diagn. Pl. Orient. 12: 61 (1853)

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.071.

Salvia lanigera Poiret in Lam., Encycl. Suppl. 5: 49 (1817)

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaeetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.019; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.043; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.027.

Salvia samuelssonii Rech. fil. in Ark. Bot., ser. 2, 1: 318 (1950) [*S. cognata* Samuelsson]

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.068; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.029.

Salvia viridis L., Sp. Pl.: 24 (1753)

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.048.

Sanguisorba minor Scop., Fl. Carnid., ed. 2, 1: 110 (1771), subsp. *verrucosa* (G. Don fil.) Cout., Fl. Portugal: 296 (1913) [*Poterium verrucosum* G. Don fil.; *S. verrucosa* subsp. *magnolii* (Spach) Cout.; *S. verrucosa* (G. Don fil.) A. Braun & Bouché]

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.025.

Sarcopoterium spinosum (L.) Spach in Ann. Sci. Nat., Bot., ser. 3, 5: 53 (1846)
[*Poterium spinosum* L.]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.058; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.007.

***Satureja thymbra* L., Sp. Pl.: 567 (1753)**

Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.047.

***Savignya parviflora* (Delile) Webb in Giorn. Bot. Ital. 2 (2, 1): 215 (1849)**

Southern Negev: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.035; **Southern Negev:** Near Kibbutz Shizafon. Wadis in gravel plain, 35°02'05"E-30°03'00"N. 430 m. 29.03.1989, 29.010.

***Scaligeria napiformis* (Sprengel) Grande in Bull. Orto Bot. Regia Univ. Napoli 4: 188 (1913) [*S. cretica* Boiss.]**

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.034.

***Scandix iberica* MB., Fl. Taur.-Cauc. 1: 230, 425 (1808)**

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.064; **Kinnrot Valley (Upper Jordan Valley):** near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.025.

***Scandix pecten-veneris* L., Sp. Pl.: 256 (1753)**

Philistine Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.051; **Golan:** Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.024.

***Schimpera arabica* Boiss., Fl. Orient. 1: 384 (1867)**

Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.053.

***Schismus arabicus* Nees, Fl. Afr. Austral. III.: 422 (1841)**

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.049; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.045; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.057; **Negev Highlands:** 8 km SW of Yerokham.

Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.025; Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.031; Southern Negev: 6 km S of Zihor junction. chalky ground in Eocene chalk hills, 35°01'00"E-30°16'30"N. 390 m. 29.03.1989, 28.007.

Scilla cilicica Siehe in Gard. Chron., ser. 3, 44: 194, f. 81 (1908) [*S. hohenackeri* Fischer & C. A. Meyer; *S. palaestina* Feinbrun]

Mt. Hermon: lower teliferique. Slopes of hard karstic Jurassic limestones, 35°46'20"E-33°17'30"N. 1690 m. 4.4.89, 49.014.

Scilla hyacinthoides L., Syst. Nat., ed. 12, 2: 243 (1767)

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.001.

Scirpus holoschoenus L., Sp. Pl.: 49 (1753) [*Holoschoenus vulgaris* Link]

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.023.

Scirpus maritimus L., Sp. Pl.: 51 (1753) [*S. tuberosus* Desf.]

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.034.

Sclerocephalus arabicus Boiss., Diagn. Pl. Orient. 3: 12 (1843)

Negev Highlands: Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.004.

Sclerochloa dura (L.)P. Beauv., Ess. Agrostogr.: 98, 177, t. 19, f. 4 (1812)

Upper Galilee: near Sasa. Muddy soil at the margins of a vernal pool, 35°23'20"E-33°04'15"N. 810 m. 5.4.89, 52.005.

Scorpiurus muricatus L., Sp. Pl.: 745 (1753) [*S. sulcatus* L.]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.052; Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown

lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.090; **Samaritan Desert**: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.003; **Judean Mts**: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.041.

Scorzonera judaica Eig, Pl. Palestina, Anal. Key: 399 (1931) [*S. pseudolanata* Grossg.]

Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.033.

Scorzonera papposa DC., Prodr. 7: 119 (1838)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.055; **Judean Mts**: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.024; **Negev Highlands**: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.015.

Scrophularia deserti Delile, Descr. Egypte, Hist. Nat.: 240 (1813)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.053; **Arava Valley**: Grofit junction. Large pebbly wadi, 35°04'00"E-29°59'30"N. 150 m. 29.03.1989, 32.001.

Scrophularia hypericifolia Wydler in Mém. Soc. Phys. Genève 4: 166 (1828)

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.052.

Scrophularia rubricaulis Boiss., Diagn. Pl. Orient. 12: 34 (1853) [*S. michoniana* Cosson & Kralik]

Judean Foothills: near Netiv Halamed-hei. *Acacia albida* reserve, deep clayey soil (grumusol), 34°57'40"E-31°41'20"N. 270 m. 21.03.1989, 01.001; **Golan**: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.029.

Scrophularia xanthoglossa Boiss., Diagn. Pl. Orient. 12: 38 (1853)

Phillstean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"E-31°34'20"N, 70 m. 21.03.1989, 03.023; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.033; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.002; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.008; **Golan:** Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.022.

Scrophularia xylorrhiza Boiss. & Hausskn. in Boiss., Fl. Orient. 4: 506 (1879)

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.001.

Sedum amplexicaule DC. in Mém. Agric. Soc. Agric. Dép. Seine 11: 12 (1808), subsp. *tenuifolium* (Sm.) Greuter in Willdenowia 11: 277 (1981)

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.035.

Sedum caespitosum (Cav.) DC., Prodr. 3: 405 (1828)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02-Ham No. 31071, 2n=24; **Kinnrot Valley (Upper Jordan Valley):** near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40-Ham No. 31091, 2n=24; **Golan:** Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43-Ham No. 31093, 2n=24; **Golan:** Odem Forest, near Masa'ada. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48-Ham No. 31098, 2n=24; 48-Ham No. 31099, 2n=24.

Sedum hispanicum L., Cent. Pl. 1: 12 (1755)

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08-Ham No. 31077, 2n=14; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13-Ham No. 31079, 2n=14; **Negev Highlands:** Nahal Loz and Borot Loz (various habitats), 34°39'30"E-30°30'00"N. 960-1.000 m.

27.03.1989, 20-Ham No. 31083, 2n=14; Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.035; Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40-Ham No. 31092, 2n=14; Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44-Ham No. 31094, 2n=14; Golan: Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46-Ham No. 31097, 2n=14; Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53-Ham No. 31104, 2n=14.

In contrast to the often perennial large, and much branched forms of *S. hispanicum* from Europe and Anatolia, the plants from Israel are strictly monocarpic and usually quite small, with simple stems. Furthermore, they have broader, less glaucous leaves, which usually lack papillae at the tip. The specimen n° 21.003 is of extraordinarily small and depauperate plants with short, simple stems and strongly reduced inflorescences with only 1 or 2 flowers (rarely 5). The flowers of *S. hispanicum* are normally 6- or 7-merous (5- to 9-merous) and obdiplostemonous. These specimens, however, have 5-merous (rarely 6-merous), predominantly haplostemonous flowers, which is extremely unusual in *S. hispanicum*. Their nectary scales are oblong and faintly denticulate instead of broadly spatulate and coarsely dentate to deeply bilobate. They resemble the plants collected by Ham (08-Ham, 13-Ham, and 20-Ham), which also have small nectary scales and partial reduction of the number of stamens. Similarly, they may be autogamous. The cultivated plants (from 08-Ham, 13-Ham, and 20-Ham), however, had many-flowered inflorescences and 6- or 7-merous flowers.

H.T HART

Sedum laconicum Boiss. & Heldr. in Boiss., Diagn. Pl. Orient. 6: 55 (1846), subsp. *pallidum* Hart & Ham in Israel J. Bot. (in press)

Mt. Hermon: near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51-Ham n° 31103, 2n=32.

Differs from *S. laconicum* subsp. *laconicum* from the Greek mainland in that it has larger flowers with cream-coloured or almost white petals. Furthermore, subsp. *pallidum* is tetraploid (x=8).

H.T HART

Sedum litoreum Guss., Pl. Rar.: 185 (1826), subsp. *litoreum*

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.020 and 54-Ham No. 31107 2n=60; Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58-Ham No. 31100 2n=40.

The typical form of *S. litoreum* is autogamous or pseudocleistogamous. Its flowers are rather small and have narrow petals, c. 5 (usually less than 10) stamens, small anthers (0.5-1 mm), and short styles (c. 0.5 mm). *S. litoreum* subsp. *litoreum* is common and widely distributed in coastal areas of the eastern part of the Mediterranean region. The

exogamous form, subsp. *exogamum* Hart (in Hart & Alpinar, in prep.), has larger, obdiplostemonous flowers and appears to be endemic to Crete H.T HART

The latter is quite distinctive in the field and has been described as a separate species, *Sedum praesidis* Runemark & Greuter (in Willdenowia 11: 18. 1981) \equiv *S. litoreum* subsp. *praesidis* Runemark & Greuter) Greuter, **comb. nov.** Outside Crete, it has been recently recorded from the island of Armathia in the Karpathos group (see Raus in Bot. Hron. 9:27. 1989). W. GREUTER

Sedum rubens L., Sp. Pl.: 432 (1753)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02-Ham No. 31074, 2n=10; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.004; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46', 770 m. 24.03.1989, 13.017 and 13-Ham No. 31081, 2n=10; **Negev Highlands:** 5 km SW of Yerokham. Loessial soil and near outcrops of smooth-faced limestone, 34°53'40"E-31°58'00"N. 500 m. 27.03.1989, 23-Ham No. 31085, 2n=20; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39-Ham No. 31088, 2n=10; **Golan:** near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44-Ham No. 31096, 2n=16; **Mt. Carmel:** Upper Nahal Neshet, 2 km S of Neshet. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57-Ham No. 31109, 2n=20; **Coastal Carmel:** Atilit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58-Ham No. 31114, 2n=10.

The typical form of *S. rubens* is autogamous or pseudocleistogamous. It has haplostemonous flowers (rarely with more than 5 stamens) with erect or patent petals, small anthers (less than 1 mm), and short styles (0.5-1 mm). Although it has been reported from Israel (Zohary, Fl. Palaest. 2: 7. 1972), the present collections belong to a different taxon. The plants are exogamous and their obdiplostemonous, proterandrous flowers have large anthers and long styles. This form of *S. rubens* has often been considered to be conspecific with *S. pallidum* MB. (Boissier, Fl. Orient. 2: 790. 1872; Mouterde Fl. Liban Syrie 2: 187. 1970; Chamberlain in Davis, Fl. Turkey 4: 242. 1972; Zohary, Fl. Palaest. 2: 7. 1972). However, the two taxa differ in a number of characters and, moreover, they are reproductively isolated (Hart in Willdenowia 15: 115-135. 1985; Hart in Fl. Medit. 1: 31-61. 1991). *S. rubens* is strictly annual, with erect, usually simple shoots, whereas *S. pallidum* is perennial and produces branching and rooting non-flowering shoots at the base of the ascending flowering shoots. Furthermore, the basal leaves of *S. rubens* are in whorls of four, and it has predominantly elliptic petals (broadest at the middle), usually papillate filaments (basal part), and papillate follicles. *S. pallidum* and the obdiplostemonous forms of *S. rubens* are completely allopatric. *S. pallidum* is a Euxine element restricted to the regions bordering the southern part of the Black Sea, whereas the obdiplostemonous, exogamous forms of *S. rubens* are typical east Mediterranean (Aegean) taxa. (Hart & Alpinar in Bot. Hron. 10: 641-649. 1991).

H.T HART

Sedum sediforme (Jacq.) Pau in Actas Mem. Prim. Congr. Nat. Esp. Zaragoza: 246 (1909)

Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58-Ham No. 31111, 2n=60.

Seidlitzia rosmarinus Boiss., Fl. Orient. 4: 951 (1879) [*Salsola rosmarinus* (Boiss.) Solms-Laub.]

Dead Sea Valley: near Ormat's solar ponds, 2 km N of the Dead Sea northern coast. Salty soil in wadis, 35°30'31"E-31°48'10"N, (-)370 m. 22.03.1989, 07.010.

Senecio flavus (Decaisne) Schultz-Bip. in Webb & Berth., Hist. Nat. Iles Canaries 3 (2, 2): 317 (1847)

Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.026; 26.046; Southern Negev: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.038.

Senecio glaucus L., Sp. Pl.: 868 (1753) [*S. coronopifolius* Desf.]

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.046; Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.006; Negev Highlands: 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.039.

Senecio joppensis Dinsmore in Post, Fl. Syria, ed. 2, 2: 69 (1932)

Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.011.

Senecio vernalis Waldst. & Kit., Descr. Icon. Pl. Hung. 1: 23, t. 24 (1802)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.007; Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.067; Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.013; Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.028; Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.014; Mt. Hermon: near the tomb and oak reserve of

Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.006.

Senecio vulgaris L., Sp. Pl.: 867 (1753)

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.028.

Serratula cerinthifolia (Sm.) Boiss., Fl. Orient. 3: 585 (1875)

Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.033.

Sherardia arvensis L., Sp. Pl.: 102 (1753)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.062; Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.038; Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.044.

Silene aegyptiaca (L.) L. fil., Suppl. Pl.: 241 (1782)

Mt. Hermon: near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.004.

Silene alexandrina (Ascherson) Danin in Israel J. Bot. 36: 65 (1987) [*S. apetala* Willd. var. *alexandrina* Ascherson]

Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.016.

Silene behen L., Sp. Pl.: 418 (1753)

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.002.

Silene colorata Poiret, Voy. Barbarie 2: 163 (1789)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.059; **Philistean Plain:** 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.003; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.039; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.061; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.008; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.051; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.041.

Silene coniflora Outh in DC. Prodr. 1: 371 (1824)

Negev Highlands: Nahal Loz and Borot Loz (various habitats), 34°39'30"E-30°30'00"N. 960-1,000 m. 27.03.1989, 20.002; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.030.

Silene conoidea L., Sp. Pl.: 418 (1753)

Lower Galilee: 1 km N of Nazareth. Cultivated rendzina on Senonian chalk, 35°19'00"E-32°44'00"N. 400 m. 6.4.89, 55.006.

Silene decipiens Barceló in Anales Soc. Esp. Hist. Nat. 8: 340 (1879) [*S. apetala* auct.]

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.055; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.060; **Negev Highlands:** Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.054; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.005; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.029.

Silene dichotoma Ehrh., Beitr. Naturk. 7: 143 (1792), subsp. *racemosa* (Oth) Graebner & Graebner fil. in Ascherson & Graebner, Syn. Mittelur. Fl. 5 (2): 93 (1920) [*S. trinervis* Banks & Solander]

Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.008; **Lower Galilee:** 1 km N of

Nazareth. Cultivated rendzina on Senonian chalk, 35°19'00"E-32°44'00"N. 400 m. 6.4.89, 55.007.

Silene nocturna L., Sp. Pl.: 416 (1753)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.035; Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.044; Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.042.

Silene palaestina Boiss., Diagn. Pl. Orient. 8: 80 (1849)

Samarian Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.037.

Silene rubella L., Sp. Pl.: 419 (1753), subsp. *rubella*

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.033.

Silene sedoides Poir., Voy. Barbarie 2: 164 (1789)

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.001.

Silene succulenta Forsskål, Fl. Aegypt.-Arab.: 89 (1775)

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.023.

Silene swertiifolia Boiss., Diagn. P. Orient. 1: 32 (1843) [*S. chlorifolia* auct.]

Judean Mts: Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.012.

***Sinapis alba* L., Sp. Pl.: 668 (1753)**

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.007; **Judean Mts:** Jerusalem. near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'E-31°45'15"N, 780 m. 24.03.1989, 12.016.

***Sinapis arvensis* L., Sp. Pl.: 668 (1753)**

Samaritan Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.002.

***Sisymbrium erysimoides* Desf., Fl. Atlant. 2: 84 (1798)**

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.028.

***Sisymbrium irio* L., Sp. Pl.: 659 (1753)**

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.002; **Negev Highlands:** Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.006.

***Sisymbrium officinale* (L.) Scop., Fl. Carniol., ed. 2, 2: 26 (1772)**

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.035.

***Smilax aspera* L., Sp. Pl.: 1028 (1753)**

Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.016.

***Solanum nigrum* L., Sp. Pl.: 186 (1753)**

Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.010.

***Sonchus maritimus* L., Syst. Nat., ed. 10: 1192 (1759)**

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.009.

Sonchus microcephalus Mejías in Lagasalia 16(1): 168-170 (1990)

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.019.

Sonchus oleraceus L., Sp. Pl.: 794 (1753)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.008.

Sorghum halepense (L.) Pers., Syn. Pl. 1: 101 (1805)

Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.029.

Spergula fallax (Lowe) E. H. L. Krause in Sturm, Fl. Deutschland, ed. 2, 5: 19 (1901)
[*S. flaccida* Ascherson]

Negev Highlands: 5 km SW of Yerokham. Loessial soil and near outcrops of smooth-faced limestone, 34°53'40"E-31°58'00"N. 500 m. 27.03.1989, 23.001; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.015.

Spergularia diandra (Guss.) Boiss., Fl. Orient. 1: 733 (1867)

Dead Sea Valley: near Ormat's solar ponds, 2 km N of the Dead Sea northern coast. Salty soil in wadis, 35°30'31"E-31°48'10"N, (-)370 m. 22.03.1989, 07.001; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.038; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.012; **Negev Highlands:** 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.008; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.014; **Bet-Shean Valley:** 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.001.

Spergularia salina J. Presl & C. Presl., Fl. Čech.: 95 (1819)

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.013; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.047.

Sphenopus divaricatus (Gouan) Reichenb, Fl. Germ. Excurs.: 45 (1830)

Lower Jordan Valley: 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.018; **Judean Desert:** near the entrance to Nabi Musa, 35°26'00"E-31°47'20"N. (-)120 m. 30.03.1989, 36.002; **Dead Sea Valley:** near Ormat's solar ponds, 2 km N of the Dead Sea northern coast. Salty soil in wadis, 35°30'31"E-31°48'10"N, (-)370 m. 22.03.1989, 07.007; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.036.

Stachys neurocalycina Boiss., Diagn. Pl. Orient. 12: 85 (1853)

Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.025; **Kinnrot Valley (Upper Jordan Valley):** near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.004.

Stachys palaestina L., Sp. Pl., ed. 2: 1674 (1763)

Upper Gallilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.037; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.016.

Stellaria cupaniana (Jordan & Fourr.) Béguinot, Nuovo Giorn. Bot. Ital., ser. 2, 15: 552 (1909) [*S. media* (L.) Vill. subsp. *postii* Holmboe]

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.031.

This taxon must be considered as a separate species, as in Greuter & al. (Med-Checklist 1: 286. 1984), and not be subordinated to *S. media* as Zohary (Fl. Palaest. 1: 118. 1966) did. The specimens collected in Israel (n° 48.031) are distinct enough from the typical *S. media* from the W Mediterranean to deserve recognition at the specific level.

B. VALDÉS

Stellaria pallida (Dumort.) Piré in Bull. Soc. Roy. Bot. Belgique 2: 49 (1863)

Phllistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.002; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.059.

Stipa capensis Thunb., Prodr. Fl. Cap.: 19 (1794) [*S. tortilis* Desf.]

Phllistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989,

03.073; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.013; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.047; **Northern Negev:** sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, Noacetum *mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.045; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.024; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.042; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.020.

Stipa parviflora Desf., Fl. Atlant. 1: 98, t. 29 (1798)

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.052; **Southern Negev:** 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.022.

Stipa pellita (Trin. & Rupr.) Cvelev in Novosti Sist. Vyss. Rast. 1966: 19 (1966) [*S. fontanesii* auct.]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.056.

Stipagrostis ciliata (Desf.) De Winter in Kirkia 3: 133 (1963) [*Aristida ciliata* Desf.]

Negev Highlands: Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.027.

Stipagrostis obtusa (Delile) Nees in Linnæa 7: 293 (1832) [*Aristida obtusa* Delile]

Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.018; **Negev Highlands:** Makhtesh Hazera (Makhtesh Katan). Sandy alluvium, pebbly wadis and limestone outcrops, 35°13'00"E-30°57'30"N. (-)10 m. 30.03.1989, 35.025.

Stipagrostis plumosa (L.) T. Anderson in J. Proc. Linn. Soc. Bot., 5, Suppl. 1: 50 (1860) [*Aristida plumosa* L.]

Negev Highlands: Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"N. 330 m. 30.03.1989, 34.021.

***Styrax officinalis* L., Sp. Pl.: 444 (1753)**

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.031.

***Suaeda asphaltica* (Boiss.) Boiss., Fl. Orient. 4: 938 (1879)**

Judean Desert: near the entrance to Nabi Musa, 35°26'00"E-31°47'20"N. (-)120 m. 30.03.1989, 36.001.

***Suaeda palaestina* Eig & Zohary in Palestine J. Bot., Jerusalem Ser., 3: 126 (1945)**

Dead Sea Valley: near Ormat's solar ponds, 2 km N of the Dead Sea northern coast. Salty soil in wadis, 35°30'31"E-31°48'10"N, (-)370 m. 22.03.1989, 07.011.

***Suaeda vera* J. F. Gmelin, Syst. Nat. 2: 503 (1791)**

Negev Highlands: Above En Avdat. Hard Eocene chalk, 34°45'20"E-30°49'30"N. 500 m. 27.03.1989, 25.001.

***Symphytum brachycalyx* Boiss., Diagn. Pl. Orient. 4: 43 (1844) [*S. palaestinum* Boiss.]**

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.013; **Mt. Hermon:** near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.010.

***Tamarix aphylla* (L.) Karsten, Deut. Fl.: 641 (1882) [*T. articulata* Vahl]**

Negev Highlands: Makhtesh Hathira, Nahal Hathira. Sandy-silty wadi, 35°01'00"E-30°57'03"N. 310 m. 30.03.1989, 33.001.

***Tamarix nilotica* (Ehrenb.) Bunge, Tent. Gen. Tamar.: 54 (1852)**

Arava Valley: Yotvata. Disturbed ground and wadis, 35°03'30"E-29°59'10"N. 100 m. 29.03.1989, 31.005.

***Tamarix tetragyna* Ehrenb. in Linnaea 2: 257, 258 (1827)**

Bet-Shean Valley: 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.012.

Tamus communis L., Sp. Pl.: 1028 (1753)

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.012.

Tamus orientalis Thiébaud in Bull. Soc. Bot. France 81: 119 (1934)

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.039.

Taraxacum cyprium Lindb. fil. in Acta Soc. Sci. Fenn. Ser. B, Op. Biol. 2 (7): 36 (1946) [*T. megalorrhizon* (Forsskål) Hand.-Mazz., p.p.]

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.024.

Teesdalia coronopifolia (J. P. Bergeret) Thell. in Repert. Spec. Nov. Regni Veg. 10: 289 (1912)

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.032.

Telmisssa microcarpa (Sm.) Boiss., Fl. Orient. 2: 795 (1872) [*Sedum microcarpum* (Sm.) Schönl.]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.035; Samarian Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.005; Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23-Ham No. 31084, 2n=14; Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40-Ham No. 31090, 2n=14; Coastal Carmel: Ailit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58-Ham No. 31112, 2n=14.

Similar to other strictly annual *Sedoideae* adapted to a very short growing period, *Sedum microcarpum* is highly specialized. Its flowers are autogamous, very small, partly sunk into the branches, 3- to 5-merous and haplostemonous. The anthers are very small, with few pollen grains, and each carpel contains only one ovule (rarely 2). The ripe follicles do not open along the ventral suture, but separate from the receptacle still encasing the single mature seed, which completely fills its lumen. Because of this

combination of advanced and partly unique characters *S. microcarpum* has been classified in the monotypic genus *Telmis* Fenzl (Pug. Pl. Nov.: 15. 1842; Boissier, Fl. Orient. 2: 795. 1872). However, the mere combination of a large number of specialized characters is no justification for separating this peculiar and conspicuous annual species from its nearest relatives (most probably *S. caespitosum*). Recognition of the monophyletic *Telmis*, instead of improving taxonomy of the *Sedoideae* or clarifying evolutionary relationships among the taxa, merely enhances the paraphyletic condition of the genus *Sedum*. (H. 'T HART). [For the purpose of this list we do, however, follow the Med-Checklist classification].
A. DANIN

Tetradiclis tenella (Ehrenb.) Litv. in Trudy Bot. Muz. Imp. Akad. Nauk 3: 122 (1907)
[*T. salsa* C. A. Meyer]

Dead Sea Valley: near Ormat's solar ponds, 2 km N of the Dead Sea northern coast. Salty soil in wadis, 35°30'31"E-31°48'10"N, (-)370 m. 22.03.1989, 07.002.

Tetrapogon villosus Desf., Fl. Atlant. 2: 389, t. 255 (1799)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.020; Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.023.

Teucrium capitatum L., Sp. Pl.: 566 (1753) [*T. polium* auct.]

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.027; 39.058; Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.072.

Theligonum cynocrambe L., Sp. Pl.: 993 (1753) [*Cynocrambe prostrata* Gaertner]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.011.

Thesium bergeri Zucc. in Abh. Math.-Phys. Cl. Königl. Bayer. Akad. Wiss. 2: 324 (1837)

Judean Mts: Jerusalem. near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.045; Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.006.

***Thesium humile* Vahl, Symb. Bot. 3: 43 (1794)**

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"E-31°34'20"N, 70 m. 21.03.1989, 03.039; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.043.

***Thlaspi perfoliatum* L., Sp. Pl.: 646 (1753)**

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.030; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.014; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.009.

***Thrinchia tuberosa* (L.) DC. in Lam. & DC., Fl. Franç., ed. 3, 4: 52 (1805)**

Judean Foothills; near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.005; **Judean Mts:** Jerusalem. near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.023; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.042; **Golan:** Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.017; **Mt. Carmel:** Upper Nahal Neshet, 2 km S of Neshet. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.013.

***Thymelaea hirsuta* (L.) Endl., Gen. Suppl. 4, 2: 65 (1848)**

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"E-31°34'20"N, 70 m. 21.03.1989, 03.041; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.035.

***Tordylium aegyptiacum* (L.) Poiret in Lam., Encycl. 7: 711 (1806)**

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.095; **Kinnrot Valley (Upper Jordan Valley):** near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.034.

Torilis arvensis (Hudson) Link, Enum. Hort. Berol. Alt. 1: 265 (1821) [*T. neglecta* Schultes]

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.050.

Torilis nodosa (L.) Gaertner, Fruct. Sem. Pl. 1: 82, t. 20, f. 6 (1788)

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.015; **Lower Jordan Valley:** 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.009.

The collection no. 09015 (at least of the Berlin set) belongs to the spiny homocarpic variant, recently described on species level as *Torilis webbii* S. Jury (in Bot. J. Linn. Soc. 95: 297. 1987). The taxon is already known to occur in Israel (Jury, l. c.) but, according to P. Lassen (pers. comm.), its specific status is a matter of further discussion. T. RAUS

Torilis tenella (Delile) G. Beck in Reichenb., Icon. Fl. Germ. Helv. 21: 83 (1867) [*Caucalis tenella* Delile]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.018; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.091; **Upper Galilee:** Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.029.

Traganum nudatum Delile, Descr. Egypte, Hist. Nat.: 204 (1814)

Arava Valley: Yotvata. Disturbed ground and wadis, 35°03'30"E-29°59'10"N. 100 m. 29.03.1989, 31.004.

Tragopogon coelesyriacus Boiss., Diagn. Pl. Orient. 11: 47 (1849) [*T. longirostris* Schultz Bip.]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.003; **Samarian Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.084; **Golan:** 5 km E of Almagor. Pseudosavanna of *Ziziphus spinachristi* accompanied by annuals; protogrumusol on basalt, 35°39'30"E-32°54'30"N. (-)40 m. 3.4.89, 42.010.

Tragopogon collinus DC., Prodr. 7: 115 (1838)

Negev Highlands: Nahal Loz and Borot Loz (various habitats), 34°39'30"E-30°30'00"N. 960-1,000 m. 27.03.1989, 20.001.

Trichodesma africana (L.) Lehm., Pl. Asperif. Nucif.: 195 (1818)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.024; Arava Valley: Yotvata. Disturbed ground and wadis, 35°03'30"E-29°59'10"N. 100 m. 29.03.1989, 31.007.

Tricholaena teneriffae (L. fil.) Link, Handbuch 1: 91 (1829)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.018; Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.037.

Trifolium alexandrinum L., Cent. Pl. 1: 25 (1755)

Kinnrot Valley (Upper Jordan Valley): near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.032; Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.025; Golan: Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.004.

Trifolium argutum Banks & Solander in Russell, Nat. Hist. Aleppo, ed. 2, 2: 260 (1794) [*T. xerocephalum* Fenzl]

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.017; Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.076; Coastal Carmel: Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.048.

Trifolium arvense L., Sp. Pl.: 769 (1753)

Golan: Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.001.

Trifolium boissieri Guss., Fl. Sicul. Syn. 2: 858 (1845)

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.021.

Trifolium bullatum Boiss. & Hausskn. in Boiss., Fl. Orient. 2: 138 (1872)

Samaritan Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.019.

Trifolium campestre Schreber in Sturm, Deutschl. Fl., Abth. 1, 16: [fol. 13-14] (1804)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.060; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.071.

Trifolium cherleri L., Demonstr. Pl.: 21 (1753)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.100; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.071.

Trifolium clusii Godron & Gren. in Gren. & Gordon, Fl. France 1: 414 (1849)

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.041.

Trifolium clypeatum L., Sp. Pl.: 769 (1753)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.039; **Golan:** 5 km E of Almagor. Pseudosavanna of *Ziziphus spina-christi* accompanied by annuals; protogrumusol on basalt, 35°39'30"E-32°54'30"N. (-)40 m. 3.4.89, 42.008; **Mt. Hermon:** near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.019.

Trifolium dasyurum C. Presl, Symb. Bot. 1: 53 (1831) [*T. formosum* Dum.-Urville]

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.087; **Samaritan Desert:** near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.045; **Negev**

Highlands: 5 km SW of Yerokham. Loessial soil and near outcrops of smooth-faced limestone, 34°53'40"E-31°58'00"N. 500 m. 27.03.1989, 23.004; **Golan:** Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.026.

Trifolium dichroanthum Boiss., Diagn. Pl. Orient. 9: 20 (1849)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.102.

Trifolium eriosphaerum Boiss., Diagn. Pl. Orient. 9: 25 (1849)

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.015; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.051; **Golan:** Odem Forest, near Masa'ada. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.020.

Trifolium erubescens Fenzl, Pug. Pl. Nov. Syr.: 5 (1842)

Golan: 5 km E of Almagor. Pseudosavanna of *Ziziphus spina-christi* accompanied by annuals; protogumusol on basalt, 35°39'30"E-32°54'30"N. (-)40 m. 3.4.89, 42.004.

Trifolium glanduliferum Boiss., Diagn. Pl. Orient. 2: 30 (1843) [*T. nervulosum* Boiss. & Heldr.]

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.011; **Golan:** near the ancient synagogue of Qazrin. Protogumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.012.

Trifolium israeliticum D. Zohary & Katzn. in Austral. J. Bot. 6: 179 (1958)

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.008.

Trifolium nigrescens Viv., Fl. Ital. Fragm.: 12. t. 13 (1808) [incl. *T. meneghinianum* G. C. Clementi]

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.010.

Trifolium palaestinum Boiss., Diagn. Pl. Orient. 9: 21 (1849)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.088; **Philistean Plain:** 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.035.

Trifolium pauciflorum Dum.-Urville in Mém. Soc. Linn. Paris 1: 350 (1822)

Golan: Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.009.

Trifolium philistaicum Zohary in Israel J. Bot. 19: 296 (1970)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.094.

Trifolium physodes MB., Fl. Taur.-Caucas. 2: 217 (1808)

Mt. Hermon: near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.017.

Trifolium pilulare Boiss., Diagn. Pl. Orient. 2: 29 (1843)

Samarian Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.020.

Trifolium prophetarum Hossain in Notes Roy. Bot. Gard. Edinburgh 23: 421 (1961)

Samarian Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.025.

Trifolium purpureum Loisel., Fl. Gall.: 484 (1807)

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.097; **Bet-Shean Valley:** 6 km SSW of Bet-Shean. Slightly saline seapages with date palms and *Phragmites australis*, dark clayey soil, 35°31'00"E-32°27'30"N. (-)200 m. 2.4.89, 38.007; **Golan:** Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.012.

Trifolium resupinatum L., Sp. Pl.: 771 (1753)

Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.040;
Negev Highlands: Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.019; **Golan:** near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.008; 44.017.

Trifolium salmoneum Mouterde, Fl. Djebel Druze: 128 (1963)

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.025.

Trifolium scabrum L., Sp. Pl.: 770 (1753)

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.010; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.020; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.077.

Trifolium scutatum Boiss., Diagn. Pl. Orient. 2: 27 (1843)

Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.042. **Golan:** Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.004.

Trifolium spumosum L., Sp. Pl.: 771 (1753)

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.036.

Trifolium stellatum L., Sp. Pl.: 769 (1753)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.040; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.086; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.006; **Judean Mts:** Jerusalem. near Ora.

Terraces on marly-chalk with poor vegetation of *Coridothymum capitati*, 35°09'E-31°45'15"N, 780 m. 24.03.1989, 12.001.

***Trifolium subterraneum* L., Sp. Pl.: 767 (1753)**

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.008; Upper Galilee: Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.007.

***Trifolium suffocatum* L., Mant. Pl.: 276 (1771)**

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.019.

***Trifolium tomentosum* L., Sp. Pl.: 771 (1753) [*T. curvisepalum* Täckh.]**

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydothymum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.087; Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.032; Samaritan Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.011, 08.018; Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.023; Northern Negev: sands of Nahal Sekher, 15 km S of Beer Sheva. Loessial stable sandy soil, *Noaetum mucronatae*, 34°49'20"E-31°06'00"N. 330 m. 26.03.1989, 16.034; Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.075.

***Trigonella arabica* Delile, Voy. Arabie Pétrée: 86 (1830)**

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.026; Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.020.

***Trigonella berythea* Boiss. & Blanche in Boiss., Diagn. Pl. Orient., ser. 2, 2: 10 (1856)**

Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.035; Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.003; Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.015.

Trigonella cylindracea Desv. in J. Bot. Agric. 3: 77 (1814)

Phillistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.101.

Trigonella lilacina Boiss., Diagn. Pl. Orient. 9: 17 (1849)

Lower Galilee: 1 km N of Nazareth. Cultivated rendzina on Senonian chalk, 35°19'00"E-32°44'00"N. 400 m. 6.4.89, 55.005.

Trigonella monspeliaca L., Sp. Pl.: 777 (1753) [*Medicago monspeliaca* (L.)Trautv.]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.056; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.079; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.021; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.038; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.025; **Kinnrot Valley (Upper Jordan Valley):** 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.065; **Golan:** near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.001; **Golan:** Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.007; **Mt. Hermon:** near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaat Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.024; **Coastal Carmel:** Atlit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.045.

An expanded circumscription of *Medicago*, based exclusively on floral characters, has been proposed by E. E. Small in several papers. The validation of names of *Trigonella* transferred to *Medicago* was effected by Small (in Willdenowia 16: 433-434. 1978). Although some doubts about the taxonomic appropriateness of this transfer have been expressed, it has been adopted by the editors of Med-Checklist. C. C. HEYN

Trigonella spinosa L., Sp. Pl.: 777 (1753)

Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.037.

Trigonella stellata Forsskål, Fl. Aegypt.-Arab.: 140 (1775)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.027; **Dead Sea Valley:** near Ormat's solar ponds, 2 km N of the Dead Sea northern coast. Salty soil in wadis, 35°30'31"E-31°48'10"N, (-)370 m. 22.03.1989, 07.012; **Lower Jordan Valley:** 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.029; **Negev Highlands:** Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.020.

Triplachne nitens (Guss.) Link, Hort. Berol. 2: 241 (1833)

Coastal Galilee: coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.036.

Tripleurospermum auriculatum (Boiss.) Rech. fil., Fl. Lowland Iraq: 629 (1964)
[*Chamaemelum auriculatum* Boiss.]

Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.017.

Tripodion tetraphyllum (L.) Fourr. in Ann. Soc. Linn. Lyon, ser. 2, 16: 359 (1868)
[*Anthyllis tetraphylla* L.; *Physanthyllis tetraphylla* (L.) Boiss.]

Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.008; **Kinnrot Valley (Upper Jordan Valley):** near En Sheva (Tabkha). South-facing limestone slope, 35°32'20"E-32°52'20"N. (-)200 m. 3.4.89, 40.036; **Judean Foothills:** near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.051.

Trisetaria linearis Forsskål, Fl. Aegypt.-Arab.: lx, 27-28 (1775)

Negev Highlands: Yamin-Rotem Plain, 10 km SSE of Dimona. Stable sand covering sandstone, 35°04'06"E-31°01'00"N. 330 m. 30.03.1989, 34.020.

Trisetaria macrochaeta (Boiss.) Maire in Bull. Soc. Hist. Nat. Afrique N. 33: 92 (1942)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.100; **Northern Negev:** 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m.

26.03.1989, 15.048; Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.026.

Triticum dicoccoides (Ascherson & Graebner) Aarons. in Verh. K. K. Zool.-Bot. Ges. Wien 59: 491 (1910)

Golan: 5 km E of Almagor. Pseudosavanna of *Ziziphus spina-christi* accompanied by annuals; protogrumusol on basalt, 35°39'30"E-32°54'30"N. (-)40 m. 3.4.89, 42.002.

Tulipa agenensis DC. in Redoûté, Liliac. 1: t. 60, add. (1804), subsp. *agenensis* [*T. oculus-solis* St-Amans]

Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.052.

Tulipa polychroma Stapf in Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl., 50: 18 (1885)

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.018.

Tulipa systola Stapf in Denkschr. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl., 50: 17 (1885) [*T. amblyophylla* Post]

Negev Highlands: 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.030.

Umbilicus intermedius Boiss., Fl. Orient. 2: 769 (1872) [*Cotyledon intermedia* (Boiss.) Bornm.]

Judean Mts: Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.050; Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.068.

Urospermum picroides (L.) F. W. Schmidt Samml. Phys.-Ökon. Aufs. 1: 275 (1795)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.105; Philistean Plain: 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydolithum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.006.

Urtica pilulifera L., Sp. Pl.: 983 (1753)

Lower Jordan Valley: 2.5 km SSE of Pzael, 16 km N of Jericho. Deep alluvial salty soil, reserve of *Salvadora persica*, 35°27'05"E-32°01'00"N, (-)280 m. 23.03.1989, 10.003.

Urtica urens L., Sp. Pl.: 984 (1753)

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.044.

Vaccaria hispanica (Miller) Rauschert in Wiss. Z. Martin-Luther-Univ. Halle-Wittenberg., Math.-Naturwiss. Reihe, 14: 496 (1965) [*V. pyramidata* Medicus]

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.065; **Lower Galilee:** 1 km N of Nazareth. Cultivated rendzina on Senonian chalk, 35°19'00"E-32°44'00"N. 400 m. 6.4.89, 55.002.

Valantia hispida L., Syst. Nat., ed. 10: 1307 (1759)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.013; **Philistean Plain:** 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydothymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.064; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.063; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.037; **Coastal Galilee:** coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.011; **Coastal Carmel:** Ailit, coastal sands, salt marsh margins, and hard calcareous sandstone (kurkar), 34°56'00"E-32°42'20"N. 2-20 m. 6.4.89, 58.006.

Valeriana dioscoridis Sm., Fl. Graec. Prodr. 1: 21 (1806)

Mt. Carmel: Upper Nahal Nesher, 2 km S of Nesher. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.021.

Valerianella coronata (L.) DC. in Lam. & DC., Fl. Franç. ed. 3, 4: 241 (1805)

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989,

08.046; Golan: Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.019.

Valerianella muricata (Steven) Baxter in London, Hort. Brit., ed. 3: 654 (1839) [*V. truncata* (Reichenb.) Betcke]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.074.

Valerianella orientalis (Schlechtendal) Boiss. & Bal. in Boiss., Diagn. Pl. Orient., ser. 2, 2: 120 (1856)

Golan: Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.020.

Valerianella szovitsiana Fischer & C. A. Meyer, Index Sem. Hort. Petrop. 3: 58 (1837)

Negev Highlands: Nahal Elot. Slopes, cliffs and wadis, 34°36'30"E-30°32'01"N. 920-980 m. 27.03.1989, 21.055; Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.004; Negev Highlands: Makhtesh Ramon, Karnei Ramon. Basalt outcrops and a few other substrata, 34°40'00"E-30°30'20"N. 770 m. 27.03.1989, 19.009.

Valerianella vesicaria (L.) Moench, Methodus: 493 (1794)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.001; 02.010; Samarian Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.073; Judean Mts: Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.029.

Velezia rigida L., Sp. Pl.: 332 (1753)

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.004.

Verbascum agrimoniifolium (C. Koch) Huber-Mor. in *Bauhinia* 5: 151 (1975)
[*Celsia heterophylla* Pers.]

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.023.

Verbascum eremobium Murb. in *Acta Univ. Lund*, ser. 2, 29: 558 (1933)

Southern Negev: Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.037.

Verbascum fruticosum Post in *Bull. Herb. Boissier* 1: 503 (1893)

Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.052.

Verbascum orientale (L.) All., *Fl. Pedem.* 1: 106 (1785) [*Celsia orientalis* L.]

Kinnrot Valley (Upper Jordan Valley): 2 km NE of Kibbutz Haon. Steep limestone and sandstone slopes, 35°38'30"E-32°44'00"N. (-)150 m. 2.4.89, 39.008.

Veronica anagallis-aquatica L., *Sp. Pl.*: 12 (1753)

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.046.

Veronica cymbalaria Bod. *Mém. Véron. Cymb.*: 3 (1798)

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.049; **Judean Mts:** Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.039; **Golan:** Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.015; 48.016.

Veronica polita Fries, *Novit. Fl. Svec.*: 63 (1819) [*V. didyma* auct.]

Judean Mts: Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.035; **Golan:** Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.022.

Veronica syriaca Roemer & Schultes, Syst. Veg. 1: 116 (1817)

Golan: Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.026.

Viburnum tinus L., Sp. Pl.: 267 (1753)

Mt. Carmel: Upper Nahal Neshet, 2 km S of Neshet. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.001.

Vicia galeata Boiss., Diagn. Pl. Orient. 2: 103 (1843)

Esdraelon Valley: near Yoqneam. deep clayey soil near the road, 35°06'10"E-32°39'45"N. 40 m. 6.4.89, 56.002.

Vicia galilaea Plitm. & Zohary in Israel J. Bot. 14: 91 (1965)

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.018.

Vicia hybrida L., Sp. Pl.: 737 (1753)

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.023.

Vicia lathyroides L., Sp. Pl.: 736 (1753)

Golan: Odem Forest, near Masaáda. Shallow soil on basalt, 35°45'15"E-33°13'00"N. 1010 m. 4.4.89, 48.002.

Vicia monantha Retz., Observ. Bot. 3: 39 (1783)

Negev Highlands: Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.012; Negev Highlands: 6 km SW of Dimona. Sandy loess soil near the nature reserve of *Iris petrana*, 34°59'00"E-31°01'30"N. 330 m. 27.03.1989, 22.031.

Vicia narbonensis L., Sp. Pl.: 737 (1753)

Philistean Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.041; Judean Desert: near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.081; Samaritan Desert: near Maále Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.026;

Northern Negev: 5 km N of Beer Sheva. Brown loessial lithosol, *Noaetum mucronatae*, 34°47'00"E-31°18'30"N. 300 m. 26.03.1989, 15.021; **Golan:** Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.027.

Vicia palaestina Boiss., Diagn. Pl. Orient. 9: 116 (1849)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.048; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.024; **Golan:** Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.006.

Vicia peregrina L., Sp. Pl.: 737 (1753)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.109; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.080; **Judean Mts:** Jerusalem, Givat Bet Hakerem, near Bet Hakerem. Dolomite outcrops, Veradim formation, Terra Rossa in karstic landscape, 35°11'30"E-31°46'00"N, 770 m. 24.03.1989, 13.025; **Judean Mts:** Kiryat Anavim. 10 km W of Jerusalem. Limestone hill, Terra Rossa, a Pine forest that was burnt 08/1987, 35°07'51"E-31°48'50"N. 750 m. 24.03.1989, 14.042; **Negev Highlands:** 2 km NW of Yerokham. Smooth-faced limestone outcrops and wadis, 34°54'30"E-31°00'05"N. 330 m. 26.03.1989, 17.021; 17.053.

Vicia sativa L., Sp. Pl.: 736 (1753) [incl. *V. angustifolia* L.]

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.043; **Philistean Plain:** 11 km S of Ashkelon. Sandy soil developed on kurkar (calcareous sandstone). *Corydthymetum capitati*, 34°34'34"46"E-31°34'20"N, 70 m. 21.03.1989, 03.099; **Philistean Plain:** 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.030; **Judean Mts:** Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'E-31°45'15"N, 780 m. 24.03.1989, 12.002; **Judean Desert:** near Mishor Adumim. Stony slopes with nari crusts on Senonian chalk. Brown lithosol, semi-steppe batha of *Echinops polyceras* and *Phlomis brachyodon*, 35°19'20"E-31°48'10"N, 250 m. 22.03.1989, 05.078.

Vicia sericocarpa Fenzl, Pug. Pl. Nov. Syr.: 4 (1842)

Mt. Hermon: near the tomb and oak reserve of Sheikh Othman, 1 km E of Qalaát Namrud, 35°43'50"E-33°15'00"N. 800 m. 4.4.89, 51.005.

Viola parvula Tineo, Pl. Rar. Sicil.: 5 (1817)

Mt. Hermon: lower teliferique. Slopes of hard karstic Jurassic limestones, 35°46'20"E-33°17'30"N. 1690 m. 4.4.89, 49.001.

Vulpia ciliata Dumort., Obs. Gramin. Belg.: 100 (1824) [*V. aetnensis* Tineo]

Negev Highlands: 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.031; **Samaritan Desert:** near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.057.

Vulpia fasciculata (Forsskål) Samp., Herbário Português: 24 (1913) [*V. membranacea* auct. non (L.) Dumort.]

Philistine Plain: 1 km S of Ashdod. Stable sand dunes, 34°40'02"E-31°46'50"N, 20 m. 21.03.1989, 04.021; **Coastal Galilee:** coast of Rosh Haniqra. Hard calcareous sandstone (kurkar), gravels and sandy soil in the sea-spray zone, 35°05'07"E-33°05'30"N. 10 m. 5.4.89, 54.037.

Vulpia muralis (Kunth) Nees in Linnaea 19: 694 (1847)

Golan: Nature Reserve (Bajuria). Grumusol and margins of a vernal pool, 35°39'30"E-32°54'30"N. 430 m. 3.4.89, 43.033.

Vulpia myuros (L.) C. C. Gmelin, Fl. Bad. 1: 8 (1805)

Judean Foothills: near Sedot Micha. Brown rendzina developing on nari crusts over Eocene chalk. Much of the area was burnt in summer 1988. *Ceratonia siliqua* - *Pistacia lentiscus* association, 34°54'43"E-31°43'25"N, 220 m. 21.03.1989, 02.097; **Judean Mts:** Jerusalem, near Ora. Terraces on marly-chalk with poor vegetation of *Coridothymetum capitati*, 35°09'00"E-31°45'15"N, 780 m. 24.03.1989, 12.008; **Negev Highlands:** 8 km SW of Yerokham. Loessial soil and stony slopes, 34°53'10"E-30°56'00"N. 500 m. 27.03.1989, 24.031.

Warburgina factorovskyi Eig in Bull. Inst. Agric. Nat. Hist. Tel-Aviv 6: 34 (1927)

Samaritan Desert: near Ma'ale Michmash. Deep clayey soil (dark brown grumusolic soil) and brown rendzina on limestone slopes, 35°05'30"E-31°52'50"N, 250 m. 23.03.1989, 08.074.

Withania somnifera (L.) Dunal in DC., Prodr. 13 (1): 453 (1852)

Lower Jordan Valley: 1 km NE of Pzael, 18 km N of Jericho. Salty or leached calcareous soil, 35°27'30"E-32°03'20"N, (-)270 m. 23.03.1989, 09.023; **Negev Highlands:** Mizpe Ramon. Weeds in gardens and among houses, 34°29'00"E-30°35'20"N. 860 m. 27.03.1989, 18.018.

Zannichellia palustris L., Sp. Pl.: 969 (1753)

Golan: near the ancient synagogue of Qazrin. Protogrumusol on basalt, 35°42'32"E-32°59'10"N. 350 m. 3.4.89, 44.042.

Zilla spinosa (L.) Prantl in Engler & Prantl, Nat. Pflanzenfam. 3 (2): 174 (1891)

Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.011; **Southern Negev:** Nahal Paran junction with Ramon-Elat road. Pebbly wadi beds, 35°56'20"E-30°20'15"N. 390 m. 29.03.1989, 27.015.

Ziziphora capitata L., Sp. Pl.: 21 (1753)

Golan: Har Shipon. Volcanic ash, 35°45'50"E-33°04'17"N. 740 m. 4.4.89, 46.016; **Upper Galilee:** Near Ya'ara. Terra Rossa on hard limestone, maquis and clearings, 35°12'00"E-33°04'10"N. 200 m. 5.4.89, 53.032; **Mt. Carmel:** Upper Nahal Neshet, 2 km S of Neshet. Terra Rossa on hard limestone, 35°31'40"E-32°45'30"N. 280 m. 6.4.89, 57.017.

Ziziphus spina-christi (L.) Desf., Fl. Atlant. 1: 201 (1798)

Dead Sea Valley: near Mizpe Dragot, 15 km N of En Gedi. Slopes and small cliffs of dolomite and wadis, 35°19'20"E-31°35'15"N, (-) 350 m. 22.03.1989, 06.036.

Zygophyllum dumosum Boiss., Diagn. Pl. Orient. 8: 125 (1849)

Southern Negev: 8 km SE of Mizpe Ramon, Nahal Gevanim. Magmatic rocks (Nordmarkite), slopes, rock outcrops and wadi beds, 34°53'15"E-30°35'00"N. 520 m. 29.03.1989, 26.069.

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