

# A Revision of the Genus *Parolinia* Webb (Cruciferae) in the Canary Islands

By David Bramwell

Department of Botany,  
University of Reading, England

## ABSTRACT

BRAMWELL, D.: A Revision of the Genus *Parolinia* Webb (Cruciferae) in the Canary Islands. — Bot. Notiser 123: 394—400, Lund.

In a taxonomic revision of the genus *Parolinia* WEBB in the Canary Islands three species are distinguished: *P. ornata* WEBB, *P. schyzogynoides* SVENT. and *P. intermedia* SVENT. & BRAMWELL, sp. nov. Descriptions, ecological and geographical data and a key to species are given.

## INTRODUCTION

The genus *Parolinia*, which occurs only in the Canary Islands, was first described by WEBB (1840) from the island of Gran Canaria. Until recently it was considered to be monotypic, containing only the type species *P. ornata* WEBB, but in 1956 a second species was found on the island of La Gomera and was described as *P. schyzogynoides* SVENTENIUS (1960).

In April 1969 the author and Dr. E. R. SVENTENIUS discovered a third species on Tenerife which is described below as *P. intermedia*.

*Parolinia* belongs to a series of woody, endemic genera — e.g. *Bencomia*, *Marcetella* (*Rosaceae*), *Gonospermum*, *Vieraea*, *Sventenia* (*Compositae*) — which occur in the Macaronesian region and in the Canary Islands in particular. All three species of *Parolinia* are of very restricted distribution (Fig. 1) and have closely similar ecological requirements, occurring on dry, sunny slopes, generally on basalt or phonolite base-rock between 100 and 500 m. They inhabit xerophytic communities belonging to the association *Rubio-Euphorbetum canariense* RIVAS & ESTEVE (1964) and in all the localities visited they occur in association with *Neochamaetea (Cneorum) pulverulenta* (VENT.) ERTM.

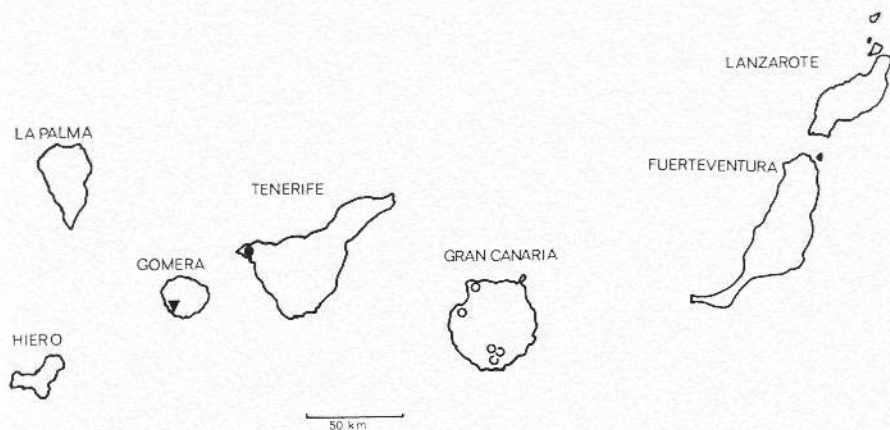


Fig. 1. Map showing the distribution of *Parolinia* in the Canary Islands.

○ = *P. ornata*; ▼ = *P. schyzogynoides*; ● = *P. intermedia*

***Parolinia* WEBB**, Ann. Sci. Nat. Bot., sér. 2, 13: 133 (1840).

Erect shrubs; stems and leaves covered with fine, grey, stellate pubescence. Leaves linear, entire. Inflorescence racemose. Flowers shortly pedicellate. Sepals erect, equal. Petals lanceolate to spatulate, clawed, pink or white. Anthers sagittate. Style  $\pm$  fleshy; stigma divaricate, shortly decurrent. Fruit an elongate, curved, latiseptate siliqua; valves with 2—9 transverse septa, the apices prolonged into two pronounced bifid appendages. Seeds brown, compressed, narrowly winged. Type species: *P. ornata* WEBB.

#### Key to the Species of *Parolinia*

- Siliqua-appendages shortly bifid or trifid; siliqua 2—3-seeded . . . . . 2. *P. schyzogynoides*  
 Siliqua-appendages deeply bifid; siliqua 4—8-seeded.  
     Siliqua, including appendages, rarely exceeding 1.8 cm in length, 4 (—5)-seeded . . . . . 3. *P. intermedia*  
     Siliqua, including appendages, 2—2.5 cm in length, 5—8 (—9)-seeded . . . . . 1. *P. ornata*

1. ***Parolinia ornata* WEBB**, Ann. Sci. Nat. Bot., sér. 2, 13: 133 (1840).

1—1.5 m, erect, greyish; stems leafy. *Leaves* linear—lanceolate, up to 10 cm long, 2 mm broad, channelled. *Racemes* 10—30-flowered. *Sepals*

erect, 5—6 mm long. *Petals* lanceolate, c. 8 mm long, 1—1.5 mm broad, clawed, pinkish. *Siliqua*, including appendages, 2—2.5 cm long, straight or curved, 5—8 (—9)-septate. *Appendages*  $\pm$  equalling valves, deeply bifid at apex. *Seeds* 5—8, oval.

Holotype: In petrosis aridissimis Canariae, Herb. Webb (FI) n.v.

Other specimens — Gran Canaria, Barranco Arguinegúin, 1.4. 1969, BRAMWELL 1219 (RNG, LTR, SEV, LAG); Ibid. KUNKEL Exsicc. Select. Fl. Canariensis 42, 1969 (Herb. Ku.); Barranco de Fataga, 28.3. 1969, BRAMWELL 2230 (RNG, SEV).

*P. ornata* has been recorded from Gran Canaria, Lanzarote and Fuerteventura but it has not been found on the latter two islands since the original collections (HARTUNG,<sup>1</sup> BOLLE, in sched.).

The species is abundant on Gran Canaria, particularly in dry barrancos of the south and west. Its distribution is discussed by SVENTENIUS (1948 p. 7) and KUNKEL (1969 pp. 1—4).

## 2. *Parolinia schyzogynoides* SVENT. Addit. Fl. Canar. 1: 11 (1960).

50—80 cm, compact, greyish-yellow; cauline leaves crowded towards apex. *Leaves* linear, somewhat fleshy, 3 cm long, 2 mm broad, channell-ed. *Racemes* up to 20-flowered. *Sepals* erect, 3 mm long. *Petals* narrowly spatulate, 6 mm long, 2 mm broad, white, turning pink in older flowers. *Siliqua*, including appendages, 0.8—1.3 cm long, usually curved, 2—3 (—4)-septate. *Appendages* shorter than or equalling valves, shallowly bifid or trifid at apex. *Seeds* 2—3, round.

Holotype: Junonia Minor (Insula Gomera); in regione austro-occidentale, Argaga a 150 m ad 300 m supra mare, 10 Octobris 1956, E. R. SVENTENIUS (ORT).

Other specimens — Gomera, Barranco de Argaga, 1.7. 1969, BRAMWELL 2046 (RNG, SEV, LTR).

This species occurs only in the south-west region of the island of La Gomera in the Barranco de Argaga between 150 and 300 m. It is fairly common in this, apparently its only, locality.

The plants form dense, compact bushes and the species is easily distinguished by its very short, few-seeded siliquae.

<sup>1</sup> The record for Lanzarote is apparently substantiated by a specimen cited by CHRIST (1888 p. 89) "Leg. Hartung teste specimeno optimo fructifero in Herb. Helvet. Turicensi servato", but efforts to trace this specimen in the Zürich Herbarium have not been successful.

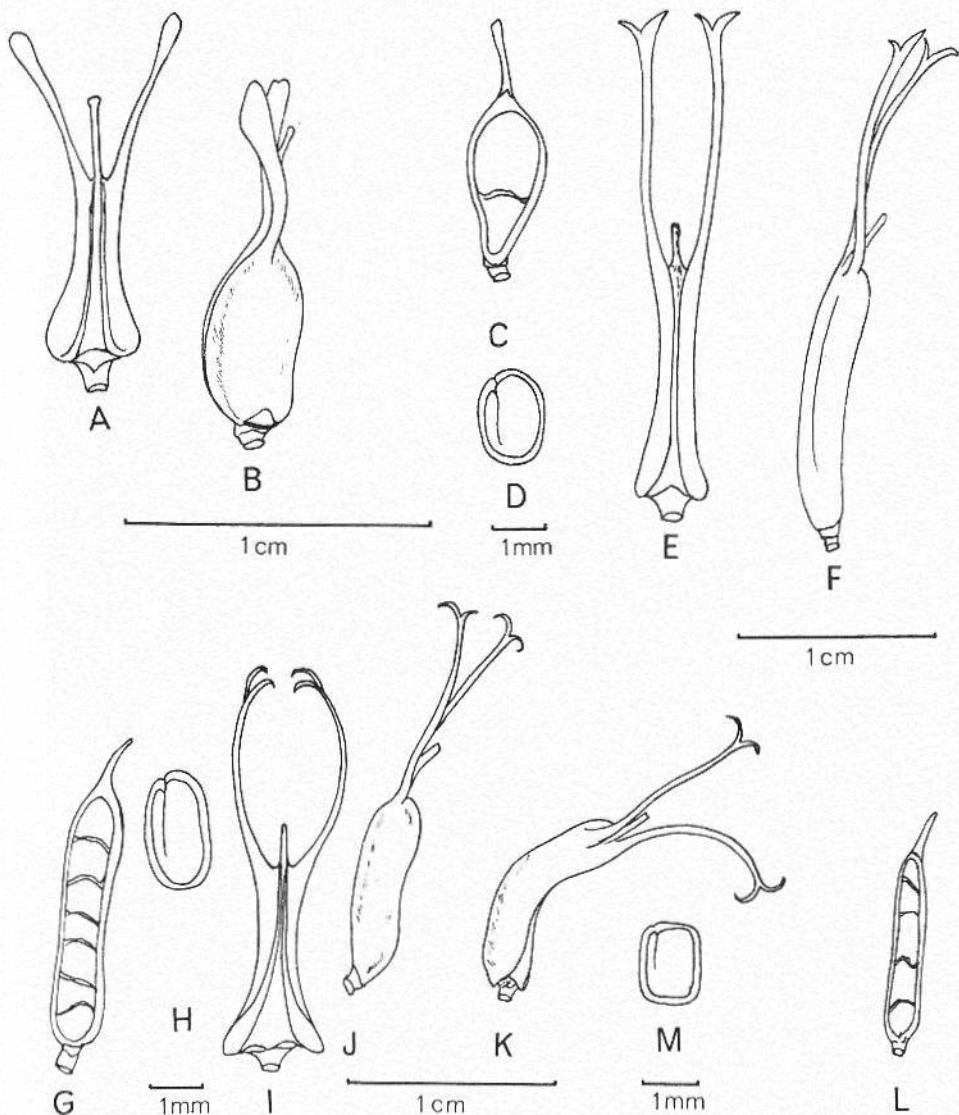


Fig. 2. A—D: *Parolinia schyzogynoides* SVENT. (BRAMWELL 2046 Gomera). — E—H: *P. ornata* WEBB (BRAMWELL 1219 Gran Canaria). — I—M: *P. intermedia* SVENT. & BRAMWELL (BRAMWELL 1453 Tenerife). — A, E, I: Dorsal view of siliqua. — B, F, J, K: Lateral view of siliqua. — C, G, L: Siliqua with valves removed showing septae. — D, H, M: Seed.

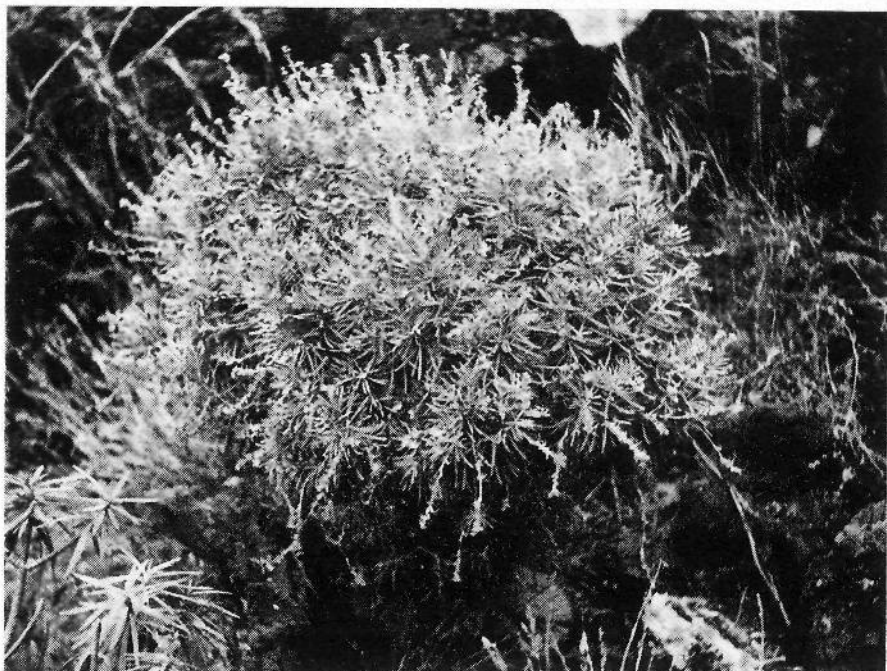


Fig. 3. *Parolinia intermedia* SVENT. & BRAMWELL, sp. nov. Punta de Teno, Tenerife (Loc. class.). Habit. — Photo: D. BRAMWELL.

### 3. *Parolinia intermedia* SVENT. & BRAMWELL, sp. nov.

Species haec a *P. ornata* WEBB et *P. schyzogynoides* SVENT. differt petalis late spathulatis; siliquis 2 cm longis, quadriseminalis; seminibus subquadratis.

Frutex ramosissimus ad 130 (—200) cm altus. Rami erecti. Cortex cinerascens, dense albo-pannosus praesertim in ramis juvenilibus. *Folia* alterna, linearia, crassiuscula, 3—6 cm longa et 2 mm lata, dense stellato-pannosa ad basin attenuata, apice obtusa; folia juvenilia canali-culata. *Inflorescentiae* racemosae, simplicia, erectae, 8—15 cm longa. *Sepala* lanceolata c. 3 mm longa et 1 mm lata, albopannosa, apice obtusa. *Petala* late spathulata, plerumque rosea raro alba, 7—8 mm longa et c. 2—2.5 mm lata, apice obtusiuscula. Filamenta 2—3 mm longa versus apicem angustata. Antherae 1.5 mm longae, triangulares obtusae ad basin cordatae. Stigma capitatum, subplanum. Ovarium 1.5 mm longum, gracile. *Siliquae* c. 1.8 cm longae (appendicibus inclusis), re-



curvatae, albo-tomentosae; valvae versus basin gibbosae, seminalibus 4—5. *Appendices* longitudinem valvarum aequantes, plerumque leviter curvatae, ad apicem profunde bifurcatae. *Semina* subquadrata, castanea, marginibus alato-scariosis. Floret Martio-Maio; fructificat aestate.

Holotypus: Insula Nivaria (Tenerife) regione septentrio-occidentali inter saxa rupesque, Punta de Teno, 24 Aprilus 1969, BRAMWELL & SVENTENIUS 1453, in Herb. Univ. Radingensis (RNG) servatus.

Other specimens — isotypes are conserved in the following herbaria: ORT, K, SEV, RNG, LTR, Fac. Cienc. Biol. La Laguna Tenerife (LAG); also Tenerife, Chio, 200 m, SVENTENIUS 1945 (ORT).

*P. intermedia* is morphologically more or less intermediate between the two other species of the genus. It is, however, considered to be a distinct species because of its angular, almost square seeds (Fig. 2), its robust habit and its curved, broad-based, 4—5-seeded siliquae.

The species occurs on the western promontory of Tenerife on dry, rocky slopes with a north-west facing aspect where the base-rock consists of Tertiary Basalt with a covering of more recent volcanic debris. It is abundant between 50 and 200 m in association with *Euphorbia canariensis* L., *Rubia fruticosa* AIT., *Neochamaelea pulverulenta* (VENT.) ERTM. and *Convolvulus scoparius* L. FIL.

#### ACKNOWLEDGEMENTS

I am indebted to the Consejo Superior de Investigaciones Científicas (Madrid) and the British Council (London) for an exchange fellowship which enabled me to study the Canary Islands Flora (1968—69) and to work at the University of Sevilla where Professor E. FERNÁNDEZ-GALIANO kindly allowed me full use of facilities.

I am also very grateful to Professor V. H. HEYWOOD of the University of Reading for fostering my Canarian studies over a number of years and to Dr. D. MOORE, also of Reading, for help and advice during the preparation of the manuscript.

Special thanks are due to Dr. ERIC R. SVENTENIUS of Tenerife for his help, advice and hospitality during my stay in the Canary Islands from October 1968 to August 1969.

#### LITERATURE CITED

- CHRIST, H. 1888. Spicilegium Canariense. — Bot. Jahrb. 9: 86—172.  
KUNKEI, G. 1969. Sobre la distribución de *Parolinia ornata* (Cruciferae) en Gran Canaria. — Cuad. Bot. (Canary) 7: 1—4.

- RIVAS GODAY, S. & ESTEVE CHUECA, F. 1964. Ensayo fitosociológico de la Crassi-Euphorbieta macaronesica y estudio de los tabaibales y cardonales de Gran Canaria. — *Anal. Inst. Bot. Cavanilles* 22: 221—339.
- SVENTENIUS, E. R. S. 1948. Plantas nuevas o poco conocidas de Tenerife I. — *Bol. Inst. Nac. Invest. Agron.* 18: 1—19.
- 1960. *Additamentum ad Floram Canariensem*. 1. — Madrid.
- WEBB, P. B. 1840. Notice sur le *Parolinia*, nouveau genre Cruciferae. — *Ann. Sci. Nat. Bot.*, sér. 2, 13: 133—140.