



NEWS

of the LEPIDOPTERISTS' SOCIETY

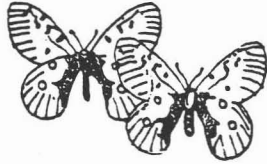
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ZONE 1 THE FAR NORTH: ALASKA, YUKON and NORTHWEST TERRITORIES. Coordinator: Kenelm W. Philip. Contributors: C. D. Ferris, J. & L. Troubridge, P. Ross, and collectors for the Alaska Lepidoptera Survey. Previously unreported localities or species are emphasized; collecting was by ALS volunteers unless noted. Note regarding Alaska Lepidoptera Survey: K. Philip (along with C. D. Ferris and J. & L. Troubridge) spent 20 June through 9 July on the Seward Peninsula, Alaska. Collecting was concentrated at 7 sites: Dry Creek (at the western foot of the Darby Mountains, near Omilak); mile 41.5 & 54 Council Road (east of Nome); mile 50 Kougarak Road (east end of the Kigluaik Mts.); Bonanza Hill on the Glacier Road, and mile 18 & 28 Teller Road. The weather was incredibly cooperative--only 3 days out of 20 were lost to poor weather, which is not the usual summer condition on the Seward Peninsula! Temperatures were abnormally high both preceding and during our field work, and the butterfly flight season was noticeably advanced. The Darby Mountains have never been collected for butterflies (barring one ALS volunteer who obtained a few specimens from unspecified sites in 1971), so the Dry Creek fauna was of considerable interest (see below). Abbreviations: A.S. = Alaska Summary; s.l. = sensu lato (in the broad sense).

YUKON TERRITORY. Weather: The southern Y.T. had a late spring, a hot and dry early summer, then poorer weather from mid-July on.

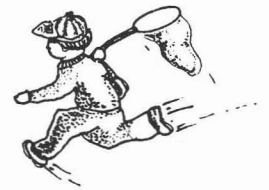
BUTTERFLIES: OGLVIE MTS- Windy Pass, km 154 Dempster Highway, 6-12 June. Ferris, Philip, and Ross report *Pyrgus centaureae*, *Parnassius evermanni*, *Artogeia napi*, *Pontia occidentalis*, *Euchloe creusa*, *Glaucopsyche lygdamus*, *Clossiana freija*, *Erebia fasciata*, *E. mackinlevensis*, *E. youngi*, *Oeneis melissa*. No new records here--but it is of interest to note which species are flying at the very start of the butterfly season. The tundra was still brown, there were patches of snow on the hillsides, and North Fork Pass, 50 miles to the south, was still in the grip of winter. The remaining Yukon Territory reports are all from C. D. Ferris: KLONDIKE HIGHWAY 2- Carcross dune area, 15 July, additional species (see 1985 A.S.), *Lycaeides idas*, *Vacciniina optilete*. Montana Mountain (south of Carcross), 15 July, additional species (see 1985 A.S.), *Colias philodice*, *Lycaeides idas*, *Boloria napaea*, *Clossiana titania*, *Erebia youngi*. YUKON HIGHWAY 11 (Stewart Crossing-Keno Road)- Km 31.5, 13-14 July, additional species (see 1985 A.S.), *Hesperia comma*, *Colias alexandra*, *C. palaeno*, *C. philodice*, *Epidemia dorcas*, *Lycaeides idas* (abundant), *Clossiana titania* (abundant), *Basilarchia arthemis*, *Phyciodes pratensis*. Keno Hill, 14 July, nothing seen except for *Clossiana chariclea* and *Oeneis melissa*. Hansen Lake Road, 14 July, additional species (see 1985 A.S.), *Colias palaeno*, *Epidemia dorcas*, *Lycaeides idas*, *Clossiana titania*.

MOTHS: OGLVIE MTS- Windy Pass, 12 June, Ferris reports: [Arctiidae] *Acsala anomala* (?), [Geometridae] *Epelis truncataria*. KLONDIKE HIGHWAY 2- Montana Mountain, 15 July, Ferris reports: [Geometridae] *Aspilates orciferarius*, [Noctuidae] *Sympistis kolthoffi*, *S. lapponica*.

ALASKA. Weather: In the Interior, a late spring was followed by a record-breaking spell of hot, clear weather in early and middle summer. 'Normal' weather resumed in mid-July. On the Seward Peninsula the same weather pattern (because of the later emergence of insects in coastal areas) produced an early spring and an unprecedented period of excellent collecting through the first week of July--at which time the weather deteriorated abruptly and ended the collecting season. New collecting sites: 1) Dry Creek, at the W foot of the Darby Mountains, 3 miles S of Omilak. In the early 1950's the Bureau of Mines improved a natural airstrip on Dry Creek, about a mile west of the mountains. The present runway is 1100 feet long--no problem for a Cessna 207. Dry Creek is about a 45-minute flight from Nome by bush plane. There is a small wooden cabin on the runway, which provides welcome protection from the occasional fierce winds that can hit this totally unprotected site. Biotopes range from tussock tundra and riverbank thickets at 250 feet elevation to blockfield and scree up to 2514 feet elevation, and include a large gravel alluvial fan (the base for the airstrip) with a markedly xeric flora. *Colias* and *Boloria* (s.l.) were not abundant here, but it was an excellent spot for rockslide



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species. 2) Council Road, mile 54, col between E fork Solomon River and Skookum River. This col is the highest point on the Council Road (1000 feet), and the peak just to the north goes up to 1737 feet. Erebia youngi was more abundant here than I have ever seen it on the Seward Peninsula, and Clossiana improba was flying in depressions on the slope N of the col. 3) Bonanza Hill, mile 4.3 Glacier Road. This was not a particularly interesting site at first glance, but proved excellent for Colias and Boloria (s.l.).

RANGE EXTENSIONS: BUTTERFLIES- Erebia mackinleyensis from 2 miles east of the Kelly River (8 miles north of the Noatak River), and the following localities on the Seward Peninsula: Dry Creek (west side of Darby Mountains), mile 54 Council Road, mile 50 Kougarok Road. The Kelly River record is the first from the Noatak drainage, and is also the first from the 230-mile gap between Ogotoruk Creek on the NW Alaskan coast, and Howard Pass in the west central Brooks Range. There have been two previous records for E. mackinleyensis from the Seward Peninsula, both from the Teller Road (see 1981 & 1969 A.S.) between Penny River and Cripple Creek--but it is now clear that the species is much more widespread, and will probably be found in many other parts of the peninsula.

BUTTERFLIES: NW ALASKA, NOATAK VALLEY- 2 miles W of Makpik Creek, 2 July, Colias thula, C. gigantea, C. palaeno, Vacciniina optilete, Clossiana freija, C. chariclea, Coenonympha kodiak, Erebia rossii, Oeneis bore, O. polixenes. Numerous localities between the Kelly River and the Nimiuktuk River, 5 July-1 August, Papilio machaon, Artogeia napi, Colias hecla, C. thula, C. nastes, C. philodice (?), C. palaeno, Lycaeides idas, Vacciniina optilete, Agriades rustica, Boloria napaea, Clossiana chariclea, Coenonympha kodiak, Erebia rossii, E. disa, E. mackinleyensis, Oeneis bore. Noatak Village, 8 July, Colias philodice, C. palaeno, Lycaeides idas, Vacciniina optilete, Clossiana chariclea, Coenonympha kodiak, Oeneis polixenes. SEWARD PENINSULA- Dry Creek, at the W foot of the Darby Mts, 3 miles S of Omilak, 20 June-1 July, Parnassius evermanni, Papilio machaon, Pontia occidentalis, Artogeia napi, Euchloe creusa, Colias hecla, C. thula, C. nastes, C. philodice, C. gigantea, C. palaeno, Everes amyntula, Glaucopsyche lygdamus, Lycaeides idas, Vacciniina optilete, Agriades rustica, Proclassiana eunomia, Clossiana frigga, C. polaris, C. freija, C. distincta, C. chariclea, Coenonympha kodiak, Erebia rossii, E. disa, E. mackinleyensis, E. fasciata, E. youngi, E. occulta, Oeneis bore, O. jutta, O. melissa, O. polixenes. Council Road, mile 53-54, 3 July, Parnassius evermanni, Papilio machaon, Pontia occidentalis, Artogeia napi, Euchloe creusa, Colias nastes, C. palaeno, Vacciniina optilete, Clossiana frigga, C. improba, C. polaris, C. freija, C. distincta, C. chariclea, Erebia disa, E. mackinleyensis, E. fasciata, E. youngi, E. occulta, Oeneis melissa, O. polixenes. Council Road, mile 41.5, near Quigley's Camp, 3 July, additional species (see 1979, 1981 A.S.), Papilio machaon, Pontia occidentalis, Colias thula, C. palaeno, Vacciniina optilete, Clossiana freija, Erebia fasciata, E. occulta (the "E. sp." of the 1979 A.S.). This locality contains a large expanse of nearly level fine gravel scree--an ideal collecting site for Erebia occulta! Kougarok Road, mile 50, E end of Kigluik Mts., 4 July, additional species (see 1976, 1980 A.S.), Parnassius evermanni, Papilio machaon, Pontia occidentalis, Artogeia napi, Euchloe creusa, Lycaeides idas, Vacciniina optilete, Proclassiana eunomia, Clossiana frigga, C. polaris, C. freija, C. distincta, Erebia rossii, E. disa, E. mackinleyensis, E. fasciata, E. youngi, E. occulta, Oeneis bore, O. melissa, O. polixenes. Bonanza Hill, mile 4.3 Glacier Road, 5-9 July, Parnassius evermanni, Papilio machaon, Pontia occidentalis, Artogeia napi, Euchloe creusa, Colias hecla, C. thula, C. nastes, C. philodice, C. palaeno, Lycaeides idas, Vacciniina optilete, Agriades rustica, Boloria napaea, Proclassiana eunomia, Clossiana polaris, C. freija, C. chariclea, Coenonympha kodiak, Erebia rossii, Oeneis bore, O. polixenes. Mt Distin, terminus of Glacier Road, 5 July, additional species (see 1976 A.S.), Oeneis melissa. Teller Road, mile 18, 2-9 July, additional species (see 1976, 1979, 1980, 1981 A.S.), Lycaeides idas (abundant), Erebia disa, E. fasciata, Oeneis bore, O. melissa. Note that the 1976 reference to "Erebia dabanensis?" from this site is actually E. occulta (abundant in 1986), which seems to be present here in numbers almost every summer. Teller Road, mile 28, Sinuk River valley, 2-7 July, more additional species, (see 1976, 1979, 1980 A.S.), Papilio machaon, Euchloe creusa, Colias nastes, Clossiana polaris, Erebia fasciata. Note: Parnassius phoebus was not observed on the Seward Peninsula this summer, despite thorough checking of previously known localities. It may have emerged after 10 July, but if so its emergence was well after any of the species it normally flies with. It was expected that the hot weather would have advanced the emergence of this species as it did all the others--but possibly moisture rather than heat is the trigger for P. phoebus, and this summer was noticeably deficient in precipitation until the weather broke in mid-July. It might also be noted here that Erebia theano has not yet been found on the Seward Peninsula. We looked for it in the Darby Mountains, but with no luck. INTERIOR ALASKA- Charley River, numerous sites from Bonanza Creek to 15 miles SSW of Copper Creek, 18 June-23 July, Colias palaeno, Lycaeides idas, Vacciniina optilete, Agriades rustica, Proclassiana eunomia, Clossiana improba, C. freija, C. titania/chariclea, Phyciodes pratensis, Nymphalis antiopa, Basilarchia arthemis, Erebia disa, E. discoidalis, E. youngi, E. epipsodea, Oeneis bore, O. melissa. Coal Creek, 10 miles W of Charley River, 7 August, Colias philodice, Epidemia dorcas, Vacciniina optilete, Clossiana titania/chariclea, Polygonia faunus. Eagle, 7 June, Erynnis persius, Papilio machaon, Glaucopsyche lygdamus, Aglais milberti, Polygonia faunus. Note: A. milberti was collected in Eagle by S. Hall Young (presumably in 1899 or 1901--there are no dates on the specimens), but I have not seen any subsequent records until this one. I was beginning to doubt that A. milberti was a resident species in Eagle--but a capture this early in the season would appear to indicate an overwintering specimen. Yukon River, 1½ miles N of Fort Hamlin, 2 July, Basilarchia arthemis (common). B. arthemis appears to have been unusually abundant in the Interior this year. Chicken, mile 65.5 Taylor Highway, 6 June, Colias near hecla (the "Murphy Dome Colias"), Glaucopsyche lygdamus, Clossiana freija. This locality was taiga, at 1650 feet elevation--considerably lower than the biotope for the Murphy Dome Colias near Fairbanks. Wickersham Dome, mile 30 Elliott Highway, 15 June, Ferris & Philip report: Papilio machaon, Pontia occidentalis, Artogeia napi, Colias near hecla, Clossiana freija, Erebia rossii, E. youngi. This is the first record for E. youngi so close to Fairbanks. Ester Dome, 14 June, Vanessa cardui. Previous Alaska records for this migratory species have been from SE Alaska. ALASKA RANGE- Windy Fork, Kuskokwim River, about 30 miles SSW of Farewell, 4700 feet, 27 July, Parnassius phoebus. SOUTHCENTRAL ALASKA- Terminus of Eureka Glacier, head of Maclaren River, 12 August, Parnassius phoebus. Independence Mine State Historical Park, head of East Fork Fishhook Creek, 3500-3700 feet, 11 July, Ferris and Philip report: Artogeia napi, Aglais milberti, Boloria napaea, Clossiana chariclea. This is an extremely lush area floristically, with a surprisingly sparse butterfly fauna--but the large B. napaea from this site are interesting. SOUTHEASTERN ALASKA- Haines Highway, mile 41 (Alaska/B.C. border), 6 September, additional species (see 1978, 1982, 1983 A.S.), Colias philodice, Speyeria mormonia.

MOTHS: SEWARD PENINSULA- Dry Creek, at the W foot of the Darby Mts, 3 miles S of Omilak, 20 June-1 July, Ferris reports: [Lymantriidae] Gynaephora rossii, [Geometridae] Aspilates orciferarius, Holarctias sentinaria, Rheumaptera subhastata, Selenia alcipharia, Semiothisa near marmorata, Scopula septentrionalis, Xanthorhoe near abrasaria, [Noctuidae] Anarta melanopa, Sympistis lapponica, Lasiestria (?) sp. Bonanza Hill, mile 4.3 Glacier Road, 5-9 July, Ferris reports: [Geometridae] Epirrhois alternata, Holarctias sentinaria, Scopula inductata.



ZONE 2 PACIFIC NORTHWEST: IDAHO, OREGON, WASHINGTON, BRITISH COLUMBIA. Coordinator: J. H. Shepard (JHS). Contributors: Ray Albright (RA), G. Cassis (GC), G. M. Cooper (GMC), C. R. Crowe (CRC), Theata Crowe (TC), David L.

Eiler (DLE), G. Eulensen (GE), C. D. Ferris (CDF), Paul C. Hammond (PCH), G. Hawk (GH), Tom Hellyer (TH) via RMP, John Hinchliff (JH), Clint Kelly (CK) via CRC, Irene Martin (IM) via RMP, John T. McBurney (JM), K. A. Phillips (KP), Robert M. Pyle (RMP), Thea L. Pyle (TLP), Harold E. Rice (HR), Richard C. Rosche (RR), Felix Sperling (FS), Steve Summers (SS), Wayne Wehling (WW), R. L. Wescott (RLW), W. D. Winter (DW). General Collecting Conditions: Collectors in the southern and especially coastal portions of the Zone reported an early and prolonged season with early and late capture records for several species. At about the Washington - British Columbia border the situation changed so that the season was normal there and slightly late in the central part of B.C., particularly for alpine species. A few contributors sent in scattered moth records but it is not possible to determine if they are County Records. The coordinator is nearly finished with a checklist and county records for PNW moths so that moths can be more accurately reported in the future.

MIGRATORY SPECIES: Several contributors (JH, RMP, RR) noted an abundance of *N. californica* in Oregon and SW Washington. CDF noted large numbers of *N. californica* in Columbia Co, Wash. and Latah Co, Ida. Other migratory species were uncommon and not observed north of central Washington.

IDAHO. CDF collected in Boundary, Latah, Idaho, Lemhi & Nez Perce Counties. DLE again collected in Canyon and Owyhee Counties in mid Aug. RR collected extensively in Bonneville, Kootenai, Shoshone, Teton Counties with several new County Records as noted below. JB collected briefly in Kootenai County in early Sept. All told this is one of the best reports from Idaho with 17 County Records!

BUTTERFLIES: *P. ruralis*, Hwy 12, Saddle Creek Rd, IDAHO Co, 30 May (CDF), Craig Mts, 300' & 800', NEZ PERCE Co (CDF); *P. catullus*, 5 mi N of Nampa, CANYON Co, 15 Aug (DLE); *P. mystic*, N of Moyie Spgs., BOUNDARY Co, 18 July (CDF); *P. sisymbrii*, Gilmore, 7200' LEMHI Co, 29 May (CDF); *A. sara*, 3 mi W of Pine Creek Pass, BONNEVILLE Co, 28 June (RR); *C. editha*, 3 mi W of Pine Creek Pass, BONNEVILLE Co, 28 June (RR), Pine Creek Pass, TETON Co, 28 June (RR); *I. a. iroides*, Craig Mts, 300' & 800' NEZ PERCE Co (CDF); *S. melinus setonia*, Post Falls, KOOTENAI Co, 2-3 Sept (JM); *S. zerene cyana*, Middle Fork of Sinker Creek at picnic area near rd to Silver City and along rd from DeLamar Mine to Jordan Valley, Owyhee Co, 16 Aug (DLE); *C. epithore*, Craig Mts, 300' & 800', NEZ PERCE Co (CDF); *H. gillettii*, Craig Mts, 300', NEZ PERCE Co (CDF); *N. californica*, Moscow Mt, Latah Co, 2 July (CDF), and Middle Fork of Sinker Creek at picnic area nr. rd to Silver City, Owyhee Co, 16 Aug, sight record (DLE) & near Calder, Shoshone Co, 9 June, one specimen (RR); *P. faunus*, Craig Mts, 800', NEZ PERCE Co (CDF); *V. annabella*, Craig Mts, 800' NEZ PERCE Co (CDF); *C. tullia ampelos*, Midland Rd near Mason Creek, N of Nampa, CANYON Co, 15 & 18 Aug (DLE); *E. epipsodea*, Craig Mts, 300' & 800', NEZ PERCE Co (CDF), & Trail Creek CG, Targhee NF, TETON Co, 28 June (RR); *D. plexippus*, Midland Rd near Mason Creek, N of Nampa, CANYON Co, 18 Aug sight record (DLE), & Jump Creek below Jump Creek Falls, Owyhee Co, 16 Aug sight record (DLE).

OREGON. John Hinchliff organized most of that reported below with independent notes from DLE, RMP, RR & WW. The Oregon records include several from earlier years for a total of 44, a remarkable number for so well collected a State.

BUTTERFLIES: *E. clarus*, ½ mi W of Schooner Crk For Camp, LINCOLN Co, 30 May (CRC); *E. propertius*, Coal Crk at S Fork Coquille River, COOS Co, 19 May (TC); *E. persius*, Norton Hill Rd at County Rd 180, LINCOLN Co, 15 May (JH); *P. ruralis*, Norton Hill Rd at County Rd 180, LINCOLN Co, 15 May (JH) & Cascade Head, TILLAMOOK Co, 28 Aug 1982 (PGH); *H. ericetorum*, Walton Lake, Ochoco Natl For, CROOK Co, mid July (HR) & 5 mi W of Ashland, JEFFERSON Co, late July (HR); *O. yuma*, Ana Reservoir, N of Summer Lake, LAKE Co, 30 July (RA) & 6 mi N of Imnaha, WALLAWA Co, 16 July 1985 (RA); *A. vialis*, HJA Exper For near Blue R., T16S R4E, LANE Co, 4 June 1980 (GMC); *P. zelicson*, Trout Creek Bridge, County Rd 180, LINCOLN Co, 15 May (JH) & Hagg Lake at Tanner Creek, WASHINGTON Co, 7 April (JH); *P. multicaudata*, HJA Exper For near Blue R., T16S R4E, LANE Co, July 1980 (GH); *P. rapae*, R.R. tracks, Nashville, LINCOLN Co, 15 May (JH) & Champoeg State Pk., Willamette R., MARION Co, 5 July (CRC); *C. alexandra*, Stuckel Mtn, SE of Klamath Falls, KLAMATH Co, 27 July (SS) & HJA Exper For near Blue R., T16S R4E, LANE Co, July 1980 (GH); *C. heteronea*, HJA Exper For near Blue R., T16S R4E, LANE Co, 4 Aug 1984 (PGH); *E. helleoides*, near Gearhart, CLATSOP Co, 20 Aug 1984 (PGH) & Slusher Lake, Camp Rilea, Clatsop Plains, Clatsop Co, 9 Aug (RMP) & ½ mi W of Schooner Crk For Camp, LINCOLN Co, 30 May (CRC); *E. nivalis*, HJA Exper For near Blue R., T16S R4E, LANE Co, 4 Aug 1984 (PGH); *A. halesus*, Stuckel Mtn, SE of Klamath Falls, KLAMATH Co, 16 Aug (SS); *S. tetra*, Howard Bay, Hwy 140, Upper Klamath Lake, KLAMATH Co, 2 Aug (SS); *B. exilis*, Klamath Falls, KLAMATH Co, 14 Aug (SS); *E. amyntula*, Coal Crk at S Fork Coquille R., COOS Co, 19 May (TC) & HJA Exper For near Blue R., T16S R4E, LANE Co, 30 July 1980 (GC), and Buck Crk Rd at Five Rivers Park, LINCOLN Co, 31 May (CRC); *C. argiolus*, Coal Crk at S Fork Coquille R., COOS Co, 19 May (TC), and Dovre Cmgd., Nestucca R. Rd, TILLAMOOK Co, 7 April (JH); *L. melissa*, Klamath Falls, KLAMATH Co, 30 July (SS); *A. mormo*, 5 mi W of Ashwood, JEFFERSON Co, late Aug (HR); *S. coronis*, Lost Lake, Santiam Pass, LINN Co, 19 July (CRC); *C. hoffmanni segregata*, HJA Exper For near Blue R., T16S R4E, LANE Co, 23 Aug (GE); *O. editha colonia*, HJA Exper For near Blue R., T16S R4E, LANE Co, 28 June 1977 (DV); *P. satyrus*, HJA Exper For near Blue R., T16S R4E, LANE Co, 11 May 1979 (GNC), and Hamer Lake, N of Nashville, LINCOLN Co, 1 June (CRC); *P. faunus*, Hagg Lake, near Tanner Creek, WASHINGTON Co, 7 April (JH); *N. californica*, Surf Pines, 2 mi N of Gearhart, Clatsop Co, 2 Oct (JH), and N Umpqua R., near Toketee Reservation, Douglas Co, 11 June, 100+ (WW) & Wizard Island, Crater Lake Natl Park, Klamath Co, 2 July (RMP); *A. milberti*, Cougar Mtn, Rd 17, LINCOLN Co, 30 May (CRC); *V. virginianensis*, Lost Lake, Santiam Pass, LINN Co, 19 July [Clint Kelly via (CRC)] and Bayocean Peninsula, TILLAMOOK Co, 2 Nov (RLW); *V. atalanta*, Champoeg St. Pk., Willamette R., MARION Co, 5 July (CRC); *L. lorquini*, Elk Creek at Deer Creek (Harland Rd), LINCOLN Co, 1 Aug (CRC); *C. sthenele silvestris*, HJA Exper. For. near Blue R., T16S R4E, LANE Co, 20 Aug (KP).

WASHINGTON. WW, RMP, and RR reported extensive collecting with most species common in eastern Washington, but despite this there were few county records! RMP reported several county records plus many unusual flight dates for SW Washington. Total county records were 16.

BUTTERFLIES: *T. pylades*, Pilgrim Firs Camp, KITSAP Co, 5 June (CDF) & Port Orchard, Kitsap Co, 7 June (DW); *E. afranius*, Wooten State Park, COLUMBIA Co, 1 July (CDF) [This represents the first authentic Washington record of this species. There may be other specimens of this species in collections, determined as *persius*, but many dissections by Shepard and Pelham have so far failed to locate any *afranius*]; *P. ruralis*, Old Rd above SR#4, T8N R4W S9, COWLITZ Co, 4 May (RMP); *H. ericetorum*, Palouse R, W of Hooper, ADAMS Co, 24 Aug (RMP); *P. zelicson*, Columbia White-tailed Deer Natl Wildlife Refuge, T9N R6W S23, Wahkiakum Co, 3 Nov, 4th & 5th instar larvae on Cow Parsnip (RMP); *P. multicaudatus*, Othello High School, ADAMS Co, 24 Aug, 2 larvae on ornamental *Fraxinus* (RMP/TLP); *N. menapia*, Lava Crk W of Lost Creek, S Prairie Rd, T4N R9E S33, SKAMANIA Co (RMP) & Oak Point Rd at Jct Rd #3000, above Little Cape Horn, T8N R5W S22, WAHAKIUM Co, 11 Sept (RMP/TLP); *P. napi*, Swede Park, Gray's R., T10N R7W S17, Wahkiakum Co, 27 March, ovipositing on *Cardamine pulcherrima*; *C. philodice*, Willard Mill, T3N R9E S1, SKAMANIA Co, 25 Aug (RMP); *C. rubidus*, Wilbur, LINCOLN Co, 22 July (WW); *S. zerene*, SH 17, 12 km N of Hwy 2, DOUGLAS Co, 21 July (WW); *S. callippe semivirida*, 5 km S of intersection of Kendall Skyline Rd & Patrick Grade Rd, COLUMBIA Co, 27 June (WW); *C. epithore*, E Fork Chehalis R, T12N R5W S14, Lewis Co, 29 March, an extremely early record (RMP); *P. satyrus*, Palouse R., W of Hooper, ADAMS Co, 24 Aug (RMP) & E Fork Chehalis R., T12N R5W S14, LEWIS Co, 30 March (RMP); *N. antiopa*, Dungeness Rec Area, T31N R4W S34, CLALLAM Co, 16 Aug (RMP/TLP); E Fork Chehalis R., T12N R5W S14, LEWIS Co, 29 March (TH); *N. californica*, Watson Lk. &

Wooten St Pk, Columbia Co, 1 July, common (CDF) & Swede Park, Gray's R., T10N R7W S17, WAHAKIUM Co, 31 Aug (TLP); V. cardui, Covered Bridge meadow, Gray's R., T10N R7W S17, Wahkiakum Co, 5 April, EARLY (RMP); V. annabella, Swede Park, Gray's R., T10N R7W S17, Wahkiakum Co, 21 April, nectaring on *Vinca major* (RMP); L. lorquini, Palouse R., W of Hooper, ADAMS Co, 24 Aug (TLP); C. pegala, SH 17, 12 km N of Hwy 2, DOUGLAS Co, 21 July (WW).

BRITISH COLUMBIA. CDF reported poor collecting along the Alaska Hwy. Resident collectors were inactive except for some collecting near Vernon and McBride.

BUTTERFLIES: O. macounii, Hwy 33 at Hall Creek Rest Area, extreme SW Record, July 19 (JHS).



ZONE 3 SOUTHWEST: ARIZONA, NEVADA, CALIFORNIA. Coordinator: R. L. Langston (RLL). Contributors: G. T. & Ana N. Austin (GTA, ANA), J. P. Brock (JPB), L. Crabtree (LC), K. Davenport (KD), J. De Benedictis (JD), T. E. Dimock (TED), C. D. Ferris (CDF), R. C. Gardner (RCG), R. C. Hamera (RCH), R. Kelson (RK), R. H. Leuschner (RHL), R. B. Nagle (RBN), J. G. Pasko (JGP), J. A. Powell (JAP), A. M. Shapiro (AMS), O. Shields (OS), R. E. & Kit Stanford (RES, KS), W. L. Swisher (WLS), W. H. Thomas (WHT), J. P. Tuttle (JPT), & D. L. Wagner (DLW). There were no reports on migrations or the "usual" migratory species for Arizona. However, the "Migratory Species" category is included for Nevada and California. The butterfly species are in the sequence of Miller & Brown, 1981, although some of the genera and resurrected synonyms may differ.

ARIZONA. Contributors: JPB, TED, CDF, RHL, RBN, JGP, RES, KS & JPT. Three COUNTY records for butterfly species, which includes one STATE record. Several rare and unusual moth species, including some undescribed, were found in Arizona. Among the known, described taxa, none were determined as new COUNTY or STATE by contributors or the coordinator.

BUTTERFLIES: Pyrrhopyge araxes arizonae was common in the Chiricahua Mtns during the Pacific Slope Meeting, Pinery Cyn., 31 July (CDF); Onion Saddle, 1 Aug (RES, KS); plus other Cochise Co records. Also in the Chiricahuas, Cogia hippalus (Pinery Cyn.), Erynnis meridianus (Pinery Cyn. & E Turkey Creek Rd.) & E. tristis tatus (Pinery Cyn. & Onion Saddle) -- all Cochise Co, 31 July - 1 Aug (CDF, RES, KS). Ancyloxypha arene, 4 mi SE of Patagonia, 23 Aug (JPB) -- 2nd record for Santa Cruz Co, with the 1st in the 1985 SS. Ochlodes snowi, Rustler Park & Atrytonopsis lunus, Paradise, Cochise Co, 1 Aug (RES, KS). Amblyscirtes cassus, near Greer, White Mtns, APACHE CO, 5 July (JPB). Panoquina silvicola, Tucson, PIMA CO & STATE record, 30 Oct 1985 (JPB), det. as silvicola by both R. A. Bailowitz & JPB. A fresh ♂ Anteos maerula lacordairei, Garden Cyn., Huachuca Mtns, 1 Sept (JGP) -- the single earlier record for Cochise Co & AZ was 13 Sept 1973. Eurema boisduvaliana, Onion Saddle, Chiricahua Mtns, 1 Aug (RES, KS). Lycaena ferrisi, Escudilla Mtn, S of Springerville, Apache Co, 29 July (CDF). One Calephelis arizonensis, Pinery Cyn., Cochise Co, 1 Aug (CDF). A fresh ♂ Heliconius charitonius vazquezae, Sawmill Cyn., Huachuca Mtns, Cochise Co, 18 Oct, very LATE (Larry Muller via JGP), also known from Pima Co, combined dates 29 Apr to 11 Sept. Speyeria mormonia luski, Escudilla Mtn, Apache Co, 29 July (CDF). Phyciodes mylitta callina, E Turkey Crk Rd., Chiricahua Mtns, 1 Aug (RES, KS). Basilarchia weidemeyerii angustifascia, Escudilla Mtn, 29 July & Rustler-Barfoot Park areas, Cochise Co, 31 July (CDF). A single Eunica monima, Turkey Creek, 5920', Chiricahua Mtns, COCHISE CO & EAST for AZ, 1 Aug (TED) -- known earlier only from Pima & Santa Cruz Cos. Mestra amymone, Tucson, 1 Nov, LATE (JPB) -- rare, but previously known from Pima Co (plus Cochise & Santa Cruz Cos, per 1983, 1984 SS's); A fresh ♂ M. amymone, Sawmill Cyn., Huachuca Mtns, Cochise Co, 18 Oct (JGP). Paramacera allyni, Rustler Park, Cochise Co, 1 Aug (RES, KS).

MOTHS: SATURNIIDAE - Agapema homogena, Greer, White Mtns, Apache Co, 4 July (JPB, RBN). Coloradia pandora davisii, Flagstaff, Coconino Co, 26 July (T. Carr, G. Gier, JPT). Anisota oslari & Sphingicampa montana fairly common at Lake Peña Blanca, Santa Cruz Co, 28 July (TC, GG, JPT). S. albolineata, Copper Cyn., Cochise Co, 29 July (J. Peacock via JPT). V instar larvae of S. hubbardi on Mesquite, Proopsis juliflora, Guadalupe Cyn., Cochise Co, 31 July (JPT). Eacles oslari adults common, Lake Peña Blanca, 28 July (TC, GG, JPT), plus ova and larvae on Western Soapberry, Sapindus drummondii, NEW FOODPLANT, 29 July (JPT). ARCTIIDAE - Lophocampa significans, Double Bar K Ranch, 20 mi W of Hwy 666, Apache Co, 5 July (JPB, RBN). L. pura, Pinery Cyn., Cochise Co, 31 July - 1 Aug (CDF). Gardinia anopla, Oak Creek Cyn., 5000', Coconino Co, 6 and 7 Aug (RHL). Hypoprepia cadaverosa & Teruptiana permaculata, Greer, Apache Co, 4 July (JPB, RBN). NOCTUIDAE - Three of a very small sp. of Panthea (Pantheinae), Oak Creek Cyn., 5000', Coconino Co, 6 and 7 Aug (RHL). Pseudanthoecia tumida (Cucullinae), Greer, 8200', White Mtns, Apache Co, 4 & 5 Aug (RHL). Catocala relicta, Hwy 666, 3 mi S of Alpine, Apache Co, 31 Aug (JPB, RBN). 25 C. euphemia, aholibah & violenta, Oak Creek Cyn., 6 & 7 Aug (RHL) plus Zale phaeocapna & Renia rigida. Scoliopteryx libatrix, 3 mi S of Alpine, 31 Aug (JPB, RBN). Phalaenophana extremalis, Alpine, 8200', White Mtns, Apache Co, 3 Aug (RHL). NOTODONTIDAE - Heterocampa belfragei, Hualapai Mtn Park, Mohave Co, 8 & 9 Aug (RHL). LASIOCAMPIDAE - Quadrina diazoma & Dicogaster coronata, Pinery Cyn., Cochise Co, 31 July & 1 Aug (CDF). GEOMETRIDAE - Hydriomena bryanti, H. cyriadoides & Xanthorhoe columelloides, Greer, 8200', Apache Co, 4 & 5 Aug (RHL). Melameca magdalena, Hwy 666, 3 mi S of Alpine, 31 Aug (JPB, RBN). TORTRICIDAE - Tina sp., Alpine, 3 Aug & Greer, 4 and 5 Aug, both 8200', Apache Co (RHL) [J. A. Powell gave a talk on this giant tortricid with Mexican and Central American relatives at the Pacific Slope Meeting.] HEPIALIDAE - Two Hepialus n. sp. came to light, Greer, 4 & 5 Aug (RHL), plus many by D. L. Wagner.

NEVADA. Contributors: GTA, ANA, and WLS. Twelve new COUNTY records for butterfly species, which includes one STATE record. GTA and ANA report that the winter of 1985-86 was very dry with the first light rain in the southern part just before mid-Jan. Thereafter quite warm -- in the low 70s through much of the rest of Jan. Early Feb cool with showers, followed by another warm spell. This brought out a number of species, accounting for 13 EARLY records for southern Nevada, with 8 species recorded in Jan. This warm weather extended to northern Nevada causing a very early thaw at the middle elevations. Summer was very dry in most of the state. Summer fauna of the lowlands was early to normal, mid elevation butterflies flew early and were nearly past by mid-July. Higher elevation areas were about normal, whereas fall collecting ended abruptly with the cold of mid-Sept.

MIGRATORY SPECIES: Nymphalis californica, Indian Creek, White Mtns, ESMERALDA CO, 11 June (GTA, ANA); a new COUNTY record, but no migration stated. Sparse movements northward of Vanessa cardui were noted in western NV, 29 Apr - 1 May; Northward flights also in central & western NV, 13 - 19 May (GTA, ANA).

BUTTERFLIES: The Pieridae records were submitted by W. L. Swisher (WLS), but all others by the Austins, hence initials not cited. E. funeralis, Meadow Valley Wash, LINCOLN CO, 22 Apr. E. persius, Sweetwater Mtns, LYON CO, 30 Apr, EARLY -- previous earliest 12 May. H. ericetorum, Carson City, CARSON CITY CO, 13 June. H. phyleus, Las Vegas, Clark Co, 19 Mar, EARLY -- previous earliest 31 Mar. P. sabuleti chusca, Las Vegas, 30 Mar, EARLY -- p.e. 14 Apr. A. campestris, Moapa Valley, Clark Co, 20 Apr, EARLY -- p.e. 4 July!! L. eufala, Las Vegas, 23 Mar, EARLY -- p.e. 7 May!! P. bairdii, Spring Valley, Lincoln Co, 22 Apr, EARLY -- p.e. 25 May. Pieris beckerii, 11 mi NW of Gerlach, 4000', Washoe Co, 19 Apr with E. hyantis & A. cethura (WLS). E. hyantis, 12 mi NW of Gerlach, 19 Apr; Soldier Meadow Rd., 8 mi NE of Hwy 34, Pershing Co, 20 Apr; 19 mi S of Soldier Meadow, 4150', Humboldt Co, 20 Apr; and 10 mi W of Fallon,

4100', Churchill Co, 18, 23 Apr (WLS). A. cethura synchronous at ALL above locations including first for HUMBOLDT CO & second for Pershing Co (WLS). A. sara thooa, 11 & 12 mi NW of Gerlach, 4000', 19 Apr (WLS). L. cupreus, Kings Cyn., CARSON CITY CO, 15 May. M. spinetorum, near Virginia City, STOREY CO, 30 Apr. I. fotis, Kingston Cyn., LANDER CO, 13 May. S. melinus pudica, Las Vegas, Clark Co, 16 Feb, EARLY -- previous earliest 25 Mar. B. exilis, Las Vegas, 19 Jan, EARLY & Railroad Pass, Clark Co, 1 Feb, EARLY -- p.e. 5 Mar. L. marina, Stonehouse, HUMBOLDT CO & NORTH, 18 June. H. isola alce, Las Vegas, 19 Jan, EARLY -- p.e. 21 Feb. P. speciosa, near Hiko Junction, LINCOLN CO, 22 Apr. Plebejus melissa ssp., Moapa Valley, Clark Co, 20 Apr, EARLY -- this is usually a summer/fall flying population with the previous earliest record on 4 Sept. Thessalia leanira nr alma, Red Cloud Mine, Clark Co, 28 Mar, EARLY -- p.e. 11 Apr. Chlosyne californica, near Goldfield Summit, EMERALDA CO, 29 Apr. Melitaea neumogeni, 1.8 mi W of Esmeralda Co line on US 6, MINERAL CO, 29 April. Euphydryas anicia wheeleri, Sweetwater Mtns, Lyon Co, 30 April, EARLY -- this population usually flies in late May. Polygonia faunus rusticus, Lake Tahoe, CARSON CITY CO and a new STATE record, 17 June.

MOths: Collected by the Austins on a number of occasions, but not yet sorted or determined.

CALIFORNIA: Contributors: LC, KD, JD, TED, ROG, RCH, RK, RLL, RHL, JGP, JAP, AMS, OS, WLS, WHT & DLW. Six new COUNTY records for butterfly species. Two possible new STATE records for moths that are generally common in adjacent Arizona. There were moderate rains in late fall and early winter in 1985, but also extended periods of clear, cold weather. Jan 1986 was a mixture of rain, showers and cloudy days, but several sunny periods warming into the high 60s in the Bay Area (RLL). Heavy, above normal rains in early Feb to the 21st (RLL), resulting in widespread flooding, and severe damage to habitats and loss of some local populations of marsh and riparian butterflies; both L. xanthoides and P. campestris devastated in Yolo & Solano Cos (AMS). Gates Cyn. (Inner Coast Range) had 28" and was blocked by mudslides until 22 Feb (AMS). Then followed by sunshine and a sudden warming; 77° on 25 Feb & 81° on 26 Feb in San Francisco (RLL), 81° on 26 Feb in Fairfield (AMS). Subsequent heavy rains in March, followed by unusually hot from mid-spring to early summer in the Bay Area (RLL). Summer remarkably cool with only three 100° days in Davis (AMS) and extensive fog along the coast (RLL), but no measurable summer rain. Heavy mid-Sept rain in the lowlands and 12" of snow at Donner Summit on 18 Sept. Thereafter, almost no precipitation through year's end. The autumn dragged on forever, with little valley fog until Christmas week (AMS), with most of the common species flying very late in the Central Valley (AMS) and along the coast (RLL). Southern California, in contrast, had a relatively dry spring. Rainfall totals somewhat below the 40 year average for most Mojave Desert locations (WLS), whereas further north (Fresno, etc.) rainfall was right at average (WLS). At Jerseydale, Mariposa Co, it was a dry winter with much below normal ppt., though heavy rains in the 3rd week of Feb, plus some in March, April and early May (OS). Dry, hot summer and fall -- few species and low numbers for the season, black-lighting poor (OS).

MIGRATORY SPECIES: Heliopetes ericetorum, Jerseydale, Mariposa Co, one migrating NW on 22 Apr, also 10 May, and occasionally migrating rapidly NW, 25 May (OS). Phoebis sennae marcellina, Coleman St., San Jose, 15 Apr & Los Gatos, Santa Clara Co, 16 Aug (ROG); Possibly resident in the Los Gatos area as sighted May, Sept & Oct, 1983, plus 4 May & 8 Sept 1984 (ROG). Nymphalis californica, several, Pt. Mugu State Park, Santa Monica Mtns, Big Sycamore Cyn., 900', Ventura Co, COASTAL, 23 Feb (TED); 150-200 at Jerseydale, 24 Feb, and migration of hibernant adults began 26 Feb (OS); Big Springs Cyn., Berkeley Hills, Alameda Co, 14 flying ESE up canyon and/or SE along ridge line, 25 Feb (JAP); Ridge above Caldecott Tunnel, 20 of 29 flying E out of Tunnel Rd. Cyn. and across ridge line & 6 moved SE along road, 27 Feb, but on 4 Mar only 3 at same site flying E or SE (JAP); At Jerseydale, 67-75/hour on 100' front 28 Feb - 1 Mar (OS); Rain early-mid-Mar, then flight resumed 19-27 Mar, with 21-61/hr/100' (OS); Brood of smaller fresh adults migrated 20-31 May, 7-31/hr/100' -- all Jerseydale (OS) -- hibernants migrated mostly SSE-ESE, while new brood migrated mostly W & NW; Hundreds to thousands of adults in canyons of Inner Coast Range (Napa, Solano, Yolo Cos) Feb - Mar, followed by local defoliation of Ceanothus (AMS); Hibernants numerous in the San Bruno Mtns, COASTAL, San Mateo Co, 25 Feb - 25 Mar (RLL), but only 20 fresh adults observed, 22 May - 9 June (RLL); 50 in 3 hours, flying southeasterly, Bakersfield, Kern Co, 24 May -- none seen before these 3 hours, and only 2 on days following -- first notable movement observed in the southern San Joaquin Valley (KD); I-80 from Cisco to Soda Springs (1230-1250 PDT--20 mins) large numbers flying S or SE on 22 July -- 3 counts of 1 min each by 3 observers averaged 52, 13 & 5.3 crossing hwy for 2 miles on west slope, and none east of Donner Summit (JAP); Thousands of fresh adults migrating S from near Sierraville south across I-80 from near Nyack to beyond Truckee, 24-31 July (AMS); Local defoliation of Ceanothus velutinus at Grouse Ridge & Sagehen Creek, Nevada Co (AMS); Abundant, Sonora Pass, Mono-Tuolumne Co line, 3 Aug (JGP); Large numbers of fresh adults on Valley floor -- Davis, 30 Sept, 2 & 9 Oct & Rancho Cordova, Sacramento Co, 12 Oct & Putah Creek, Yolo Co, 15 Oct (AMS); One in Bakersfield, 2 Oct (KD); In October, a few in semi-territorial, non-migratory behavior, Jerseydale, Mariposa Co (OS); A few hibernants in the San Bruno Mtns, 12, 25 Nov (RLL); 1 ♀ overwintering on U.C. Davis Campus, eaves of bldg, last seen 23 Dec sunning on roof (AMS). Vanessa cardui, First at Davis, Yolo Co, 2 Mar, hundreds on 26-27 Mar (AMS); Occasional in late Mar at Jerseydale, Mariposa Co, light NW migration 8-15/hr/100', 19-27 Apr, 2-7/hr/100', 28 Apr - 24 May, mostly NW & W (OS); Light NW migration between Merced & Stockton, mid-May (OS); Larvae on Lupinus succulentus & L. subvexus (unusual) plus Carduus pycnocephalus (usual), Black Diamond Way, 1-2 mi E of Clayton, Contra Costa Co, 29 Apr - 21 May (RK); Moderate numbers, San Bruno Mtns, 27 Mar - 9 June, but scarce 11 Aug - 20 Nov (RLL). Danaus plexippus, Common by 28 Feb, EARLY for inland, near Ash Mtn (entrance of Sequoia N. P.) and Lindcove, Tulare Co (KD); 1 worn at Jerseydale, 22 Apr, few adults in Aug & westerly migration mid-Sept (OS); Season unremarkable, but rather long -- Davis, 2 Mar - 30 Nov (AMS), Bay Area, 24 Feb -- 11 Nov (RLL); Early arrivals in small numbers at Natural Bridges State Beach, Santa Cruz Co, 5 Oct, large aggregations on Eucalyptus by 7 Nov (RLL).

BUTTERFLIES: E. clarus, Gates Cyn., Solano Co, 18 May -- 2nd record in 15 years (AMS). T. mexicana nevada, near Tragedy Spring Camp, W of Silver Lake, AMADOR CO, 12, 15 July (KD). 2nd brood of E. propertius, Lang Crossing, 5000', Nevada Co, 18 Aug, LATE (AMS). Fall brood of E. tristis, Marina Dunes, Monterey Co, 4 Oct (RLL). P. ruralis, near turnoff to Saddlebag Lake, Mono Co, 21 June (KD). H. phyleus, Davis, Yolo Co, 17 Dec, LATE (AMS). P. sabuleti tecumseh & P. sonora, Silver Lake & vicinity, both new for AMADOR CO, 10-15 July (KD). O. agricola verus, 1 mi N of Lamont Peak, TULARE CO & NORTH for ssp. verus, 14 June (KD). O. yuma, Silver Cyn., White Mtns, Inyo Co, 9 July (JGP). P. melane, Gates Cyn., Solano Co, apparent 3rd gen, 18 Oct, LATE (AMS) & Kensington, Contra Costa Co, common Nov, last seen 16 Dec, LATE (RLL). B. philenor hirsuta, Davis, 5 Jan, EARLY (AMS). One fresh ♂ P. indra nr nevadensis, Silver Cyn., White Mtns, Inyo Co, 9 July -- 2nd brood? (JGP). A fresh ♂ P. rutulus, in front of San Francisco City Hall, 1 Nov, very LATE (AMS). N. menapia, Jerseydale, Mariposa Co, first 19 June, very small flight, last 2 July (OS). Pieris beckerii, P. sisymbrii & A. cethura, Santa Rita Flat, 6500', 14 mi NE of Independence, Inyo Co, 24 Apr (WLS). P. sisymbrii, NW rim Santa Barbara Cyn., 2 mi SW of Cuyama River, SANTA BARBARA CO, 24 Mar (WLS); and Quatal Cyn., 5 mi E of Hwy 33, 27 March (WLS) -- 3rd record for Ventura Co. P. protodice, Marina Dunes, Monterey Co, 29 July, 6 Aug, 4 Oct, 6 Nov -- unusual on beaches in central CA (RLL) and 1st recorded late in season at Davis, Yolo Co, 29 Sept plus Gates Cyn., Solano Co, 2 Nov (AMS). Second generation P. napi venosa (mostly white), 3 mi N of Saratoga Gap, Santa Clara Co, 19 July (RLL). First generation P. napi microstriata, Soda Springs, 7000', HIGH, Placer Co, 26 June (AMS). P. napi microstriata rare 2nd generation, Marsh Creek Rd, 7 mi E of Clayton, Contra Costa Co, 28 May (RK); and Gates Cyn., 8 May, EARLY for 2nd gen. (AMS). A. cethura, ridge E of Gypsum Mine, Quatal Cyn., 5 mi E of Hwy 33, 27 Mar (WLS) -- 2nd record for Ventura Co.

"A. cethura nr. pima", Colton Hills near Providence Mtns, San Bernardino Co, 22 Mar (JGP). Major winter emergence of C. eurytheme, dozens fresh, Rancho Cordova, Sacramento Co, 16 Dec & Davis, Yolo Co, 17-23 Dec, LATE (AMS). C. alexandra, common, Beckwourth Pass, Plumas Co, 17 May plus 2nd brood, Mono Lake, 25 Aug (ANS). Zerene eurydice, Bob's Gap, Los Angeles Co, 23 Feb, high desert & Early (JGP); Jerseydale, 13 June -- unusual in Mariposa Co (OS). C. viridis, Milagra Ridge, Pacifica, San Mateo Co, 19 Mar (RLL). S. melinus pudica, Willow Slough, Yolo Co, 2 Feb, EARLY (AMS) and Marina Dunes, Monterey Co, 6 Nov, LATE (RLL). S. columella istapa in numbers!, 1 mi S of Brawley, Imperial Co, 5 Oct (KD). L. marina colonized widely in 1986; Loyaltan, 2 June and Sierraville, NORTH, 21 Aug, both Sierra Co (AMS); West and North Sacramento, 12 June (AMS); Marina Dunes, Monterey Co, NORTH for coast, 4 Oct (RLL); downtown Sacramento, 25 Oct (AMS). Small flight of C. pius, Jerseydale, 20 May - 1 June (OS). I. icarioides moroensis, W of Morro Bay High School & Baywood Park, San Luis Obispo Co, 9 May (WLS), plus near Pine Canyon Gate of Vandenberg AFB, Santa Barbara Co, SOUTH, 29 May (WLS). I. acmon, Davis, Yolo Co, 9 Dec, LATE (AMS), and spring form "cottlei", Marina Dunes, Monterey Co, 6 Nov, "EARLY" (RLL) -- with worn autumn brood. A. mormo, Mt Herman Rd, E of Felton, 19 July, and Quail Hollow Rd, SE of Ben Lomond, 19 July, 7 Aug, both Santa Cruz Co (RLL); Population at E end of Donner Pass, Nevada Co, at highest level in 15 years, 4 Sept (AMS); and still in numbers, 4 Oct, LATE, Marina Dunes, Monterey Co (RLL). A. vanillae incarnata around Passiflora, Davis, 18 Oct -- 3rd in 15 years (AMS), but flew later in Kensington, Contra Costa Co, 25 Oct, 1, 8 Nov (RLL). S. coronis, summit Morgan Territory Rd., 2000', Contra Costa Co, 10 June (RK) & Marina Dunes, sea level, LOW, 18 July -- unusual along beaches (RLL). Boloria e. epithore already worn by 18 June (China Grade), 19 June (Lompico Rd) & 10 July (Smith Grade), all Santa Cruz Mtns (RLL). Melitaea gabbi, Partington Cyn., Hwy 1, Monterey Co, 19 Apr (RG, RLL) -- M. palla here in past seasons. P. oreae, Susan River Cyn., 1 mi W of Susanville, LASSEN Co, 21 Sept 1985 (LC). Nymphalis milberti furcillata, 2 worn, Briceburg, Mariposa Co, 26 Feb, EARLY (OS); West Sacramento, Yolo Co, 3 Mar, LOW (AMS); Near Tom's Hill, Jawbone Cyn., Kern Co, 3 May (JGP); Mountain broods only fair, but large numbers of larvae at Loyaltan, Sierra Co, on Urtica holosericea, 2 June (AMS); Two adults at Rancho Cordova, 12 Oct (AMS). B. lorquini, apparent 4th gen., Willow Slough, Yolo Co, 19 Oct, and Rancho Cordova, Sacramento Co, 27 Oct (AMS). A. bredowii californica, mouth of Ventura River, sea level, Ventura Co, 19 Oct (TED) -- very unusual at the beach! C. ampelos common & apparently breeding, Castle Valley, base of Castle Peak, 7000', HIGH, Nevada Co, 26 Aug (AMS). D. gilippus strigosus, mouth of La Jolla Cyn., 14', COASTAL, Pt. Mugu State Park, Ventura Co, 2 Nov (TED).

MOTHS: SPHINGIDAE - A ♀ Smerinthus cerisyi, San Bruno Mtns, 900', San Mateo Co, 11 Aug (RLL) -- 2nd adult in 6 years, although willows abundant in area. SATURNIIDAE - A ♀ Saturnia albofasciata, Pinyon Crest, 4200', Riverside Co, 26 Oct (RHL) -- no Ceanothus for many miles. 56 small larvae of Hemileuca electra clio on Eriogonum fasciculatum, Rabbit Dry Lake, San Bernardino Co, 29 Jan; Returned 7 Oct with emgd ♀ and attracted 93 ♂♂ (WHT). Approx 200 V instar larvae of H. burnsi on Cotton Thorn, Tetradymia spinosa, Little Rock Creek, Los Angeles Co, 27 Mar; Returned 4 Oct with fresh ♀ and attracted 153 ♂♂ in 3 hours (RCH). NOCTUIDAE - Metalepsis cornuta, San Bruno Mtns, 1250', 23 Dec, LATE (RLL). Orgyia magna & Fotella olivia, Aguanga, 2000', Riverside Co, 20 Apr (RHL). Leucania oaxacana (det by Morton Adams) & Oncocnemis deceptiva, Pinyon Crest, 26 Oct (RHL) -- both common in AZ, but new to RHL in CA. Orthosia praeses & Trachea ethnica, San Bruno Mtns, 1300', 6 Jan, EARLY (RLL). Hydroecia immanis, SBM, 900', 25 Aug (RLL). Heliothodes that comes to light (distinct from the diurnal diminutiva), Aguanga, 31 July (RHL). Catocala macdunnoughi, O'Neill Cyn, 4000', Kern/Ventura Cos, 13 July (RHL). LASIOCAMPIDAE - Larvae of Gloveria medusa on Eriogonum fasciculatum, S of Lake Mathews, Riverside Co, 29 Mar; Returned 20 Sept and found egg rings (JGP). GEOMETRIDAE - Idaea eremita, 20 June & Lithostege angelicata, 27 Apr, Aguanga, 2000', Riverside Co (RHL). Hydriomena septemnerata, Pinyon Crest, 26 Oct (RHL). H. nubilofasciata & Neoterpes ephelidaria, Bodega Head, Sonoma Co, 2 Jan, EARLY (RLL). PYRALIDAE - Only 3 Diastictis fracturalis found in San Bruno Mtns, 27 Mar, 23 June & 7 July (RLL) -- none in previous 5 years. Pyrausta subsequalis petaluma Munroe, reared from introduced Thistle, Cirsium sp., SBM, coll 30 Apr, emgd 1 June (JD) -- adults flying every month of years 1982-86 (JD, RLL). TORTRICIDAE - Epinotia lomonana reared from Holly-leaved Cherry, Prunus ilicifolia, SBM, coll 30 Apr, emgd 29 Sept-27 Oct -- NEW to SBM survey, NEW host (JD). COSSIDAE - A ♀ Prionoxystus robiniae, Pinyon Crest, 4200', Riverside Co, 21 June (RHL) -- no Locust Trees or Cottonwoods for many miles. GELECHIIDAE - Dichomeris baxa Hodges, reared from Golden Aster, Chrysopsis villosa var. bolanderi, SBM, coll 11 June, emgd 30 June - 5 July (JD, DLW) -- collected once on San Bruno Mtn by R. M. Brown, but just described in 1986; Not previously reared from SBM & hostplant NEW (JD, DLW). OECOPHORIDAE - Agonopterix alstroemeriana, reared from Poison Hemlock, Conium maculatum, SBM, coll 2 Apr, 14 May, emgd 6-24 May, 23 June (JD); This introduced moth also at lights in winter, SBM, 28 Nov 83 & 18 Dec 85 (RLL). SESIIDAE - Ramosia polygona, adults associated with Eriogonum l. latifolium, Marina Dunes, Monterey Co, 18, 29 July (RLL). PLUTELLIDAE - Plutella porectella, reared from Barbarea verna, San Bruno Mtns, coll 24 Jan, emgd 18 Feb-2 Mar -- this introduced Winter Cress is a NEW HOST of this introduced moth (JD); Adults found earlier on SBM, 13 June 83 & 28 Feb 84, indicating more than one brood (RLL). TINEIDAE - 24 Tinea occidentella & 60 T. niveocapitella adults reared from owl & hawk pellets, coll Jan-Mar, emgd Mar-early July -- NEW hosts for SBM survey (JD, DLW); Adults at lights, winters to early summers, 1982-86 (RLL). HEPIALIDAE - A single ♂ Hepialus hectoides, flying in sunshine, 12:40 p.m. PST, San Bruno Mtns at 1100', 4 Mar (RLL).



ZONE 4 ROCKY MOUNTAINS: ALBERTA, MONTANA, WYOMING, UTAH, COLORADO and NEW MEXICO. Coordinator: Ray E. Stanford (RES). Contributors: George T. Austin (GTA), F. Martin Brown (FMB), the Karölis Bagdonas "Flying Circus" (including Peg Abbott, Nancy Allen, William Bagdonas, P. J. Benham, Scott Benson, Wayne Bushonville, Kate Helfrich, Paula Kleintjes, Karin Long, Candy and Rob O'Hurley, Mary Kate Schroeder, Lisa Snyder, Kay Tilbury, Alex Vargo) (BFC), Steven J. Cary (SJC), Harry K. Ctench (HKC), Terhune S. Dickel (TSD), David L. Eiler (DLE), Scott L. Ellis (SLE), Clifford D. Ferris (CDF), Gary B. Gier (GBG), Clyde F. Gillette (CFG), Jack L. Harry (JLH), Richard W. Holland (RWH), Joel M. Johnson (JMJ), Samuel A. Johnson (SAJ), Lewis C. Keenan (LCK), Roy O. Kendall (ROK), Richard L. Klopshinske (RLK), Steven J. Kohler (SKJ), John T. McBurney (JTM), Michael L. McInnis (MLM), Paul A. Opler (PAO), Floyd and June Preston (F/JP), Richard C. Rosche (RCR), Patrick and Susan Savage (P/SS), James A. Scott (JAS), Stephen W. Sommerfeld (SWS), Steve Stone (SS), Michael E. Toliver (MET), James P. Tuttle (JPT), Ernest H. Williams (EHW). Total 32, compared with 36 last year. Data received included 1304 total records, of which 1142 were for butterflies and 162 for moths. There were 9 state records and 901 county records for butterflies, the second best year since I became coordinator. Again, the volume of moth data received was disappointing. Nearly 20 additional bf species were completed from all counties of a particular state. Data were received for 271 species of bfs, a new high; the total for the last ten years combined is 372 species. The 1986 season was a very good one overall, mainly early and dry at lower elevations and about normal up high. Many southern immigrant species were observed, as was also true in Kansas (Chas Ely). The Summary format is as previously; the year for all records is 1986 except as noted. Capitalized county names represent new county records for my files. I hope eventually, with computerisation, to start indicating new county records for moths as well as butterflies. This is a ways away, however. I express thanks to all contributors, and wish all a good year in 1987!

ALBERTA. The only contributor was JTM, who recorded the following butterfly species from Ft MacLeod, 27 Aug: O.

sylvanoides, P. occidentalis, C. philodice, L. helloides, E. claudia and S. atlantis beani. No moths were reported.

MONTANA. Contributors: BFC, SLE, GBG, JLH, SJK, F/JP. No one commented on the season, but from the data received it must have been fairly dry and advanced, with numerous records for southern casual species. No moths were reported.

BUTTERFLIES: Over 350 data points were received, representing 109 species and 333 new county records. There were two state records (Boloria frigga and Amblyscirtes oslari), both of which are probably breeding resident species. Two more species were completed from all MT counties (P. occidentalis and V. cardui), raising that total to 4 (the other two are C. philodice and C. pegala). The MT avg number of species/county is now 70.38. E. clarus, Missouri Rvr Breaks, C M Russell Refuge, FERGUS Co, 10 Jun (SJK). T. pylades, Bear Paw Mts, S of Havre, HILL Co, 3 Jun; S of Forsyth, ROSEBUD Co, 6 Jun (both SJK). E. icelus, SW of Nye, STILLWATER Co, 6 Jun (SJK, det CDF). E. afranius, Bear Paw Mts, BLAINE Co, 4 Jun; E of Canyon Ferry, BROADWATER Co, 9 Jun; Little Snowy Mts, GOLDEN VALLEY Co, 29 May; Fish Crk Rd, MINERAL Co, 16 May; W of Judith Gap, WHEATLAND Co, 30 May (all SJK, det CDF). P. ruralis, Highwood Mts, CHOUTEAU Co, NE, 28 May; 1 mi W of Checkerboard, MEAGHER Co, 11 Jun; Fish Crk Rd, MINERAL Co, 16 May; W Fk Stillwater Rvr, SW of Nye, STILLWATER Co, 7 Jun; Roberts Crk, W of Judith Gap, WHEATLAND Co, 30 May (all SJK). P. communis, nr Wisdom, BEAVERHEAD Co, SW, 27 May; Highwood Mts, JUDITH BASIN Co, 28 May; nr Chester, LIBERTY Co, 18 Aug; S of Conrad, PONDERA Co, 18 Aug; W Fk Stillwater Rvr, SW of Nye, STILLWATER Co, 7 Jun; E of Big Timber, SWEET GRASS Co, 6 Jun; Teton Rvr, N of Collins, TETON Co, 18 Aug (all SJK). P. catullus, N of Baker, FALLON Co, 5 Jun (SJK); 5 mi SW of Bell Crk, POWDER RIVER Co, 10 Jul 1985 (SLE); nr Terry, PRAIRIE Co, 6 Jun (SJK); S of Forsyth, ROSEBUD Co, 6 Jun (SJK). H. uncas, 14 mi E of Glendive, DAWSON Co, 20 Aug (SJK, det CDF). H. juba, Pryor Mts, BIG HORN Co, 14 Aug; SE of Ekalaka, CARTER Co, SE, 20 Aug; 40 mi E of Miles City, CUSTER Co, 20 Aug; E of Glendive, DAWSON Co, 20 Aug; N of Wibaux, WIBAUX Co, 20 Aug (all SJK, det CDF). H. comma, Bear Paw Mts, BLAINE Co, 19 Aug; 40 mi E of Miles City, CUSTER Co, 20 Aug; N of Baker, FALLON Co, 20 Aug; Bear Paw Mts, HILL Co, 19 Aug; nr Zortman, Little Rocky Mts, PHILLIPS Co, 19 Aug; Bighorn, TREASURE Co, 21 Aug; nr Ft Peck, VALLEY Co, 19 Aug (all SJK, det CDF). H. ottoe, 5 mi SW of Bell Crk, POWDER RIVER Co, 10 Jul 1985 (SLE, det RES). H. pahaska, SE of Ekalaka, CARTER Co, SE, 20 Aug LATE (? second generation) (SJK, det CDF). H. leonardus pawnee, SE of Ekalaka, CARTER Co, SE, 20 Aug; N of Baker, FALLON Co, 20 Aug; Bighorn, TREASURE Co, 21 Aug; nr Ft Peck, VALLEY Co, NORTH, 19 Aug; N of Wibaux, WIBAUX Co, 20 Aug; nr Custer, YELLOWSTONE Co, 21 Aug (all SJK, det CDF). H. nevada, Pike Crk Rd, PONDERA Co, 25 Jun (SJK, det CDF). P. themistocles, 3500', MISSOULA Co, 17 Jun 1967 (GBG). P. draco, Cottonwood Crk, MEAGHER Co, 7 Jul 1985 (F/JP). P. mystic, 7 mi NW of Babb, GLACIER Co, 26 Jun (SJK, det CDF). Q. sylvanoides, nr Chester, LIBERTY Co, 18 Aug; S of Conrad, PONDERA Co, 18 Aug (both SJK). A. oslari, nr Horton, CUSTER Co, STATE, NORTH, 5 Jun; N of Baker, FALLON Co, 5 Jun (both SJK, det CDF). P. phoebus, Pryor Mts, BIG HORN Co, EAST, 14 Aug (SJK). P. bairdii oregonius, Missouri Rvr Breaks, C M Russell Refuge, FERGUS Co, 10 Jun; Missouri Rvr Breaks, S of Landusky, PHILLIPS Co, NE, 10 Jun (both SJK). P. zelicaon, Bear Paw Mts, nr Lloyd, BLAINE Co, 4 Jun; E of Canyon Ferry, BROADWATER Co, 9 Jun; 3 mi N of Melrose, SILVER BOW Co, 13 Jun; W Fk Stillwater Rvr, SW of Nye, STILLWATER Co, 7 Jun (all SJK). P. rutulus, Aspen Cg, CASCADE Co, 6 Jul 1985 (F/JP); Highwood Mts, CHOUTEAU Co, 28 May; E of White Sulphur Spgs, MEAGHER Co, 9 Jun; Zortman, PHILLIPS Co, NE, 10 Jun; Pike Crk Rd, PONDERA Co, 25 Jun; 3 mi N of Melrose, SILVER BOW Co, 13 Jun; W Fk Stillwater Rvr, SW of Nye, STILLWATER Co, 7 Jun (all SJK). P. multicaudatus, Mt Henry, nr Two Medicine, GLACIER Co, 25 Jun; 3 mi N of Melrose, SILVER BOW Co, 13 Jun (both SJK). P. eurymedon, Mt Henry, nr Two Medicine, GLACIER Co, 25 Jun; Pike Crk Rd, PONDERA Co, 25 Jun; 3 mi N of Melrose, SILVER BOW Co, 13 Jun (all SJK). N. menapia, Pryor Mts, BIG HORN Co, EAST, 14 Aug; W Rosebud Rvr, Mystic Lake Rd, STILLWATER Co, 15 Aug (both SJK). P. sisymbrii, Keystone Gulch, W of Superior, MINERAL Co, 1 May (SJK). P. protodice, Pryor, BIG HORN Co, 9 Sep (BFC). P. occidentalis, N of Baker, FALLON Co, 5 Jun; Sweetgrass Hills, E of Whitelash, LIBERTY Co, 22 May; Pike Crk Rd, PONDERA Co, 24 Jun; E of Ashland, POWDER RIVER Co, 20 Aug; nr Terry, PRAIRIE Co, 6 Jun (all SJK); now all MT counties. P. rapae, nr Chester, LIBERTY Co, 18 Aug; E of Ashland, POWDER RIVER Co, 20 Aug (both SJK). E. ausonides, Bear Paw Mts, nr Lloyd, BLAINE Co, 4 Jun; E of Flatwillow, PETROLEUM Co, 10 Jun; S of Forsyth, ROSEBUD Co, EAST, 6 Jun (all SJK). E. hyantis, Davis Crk, S of Lolo, MISSOULA Co, 8 Apr (SJK). E. olympia, Glendive, DAWSON Co, NE, 5 Jun; Highwood Mts, JUDITH BASIN Co, 28 May; SW of Wibaux, WIBAUX Co, 5 Jun (all SJK). A. sara, Highwood Mts, CHOUTEAU Co, 28 May; Little Snowy Mts, GOLDEN VALLEY Co, 29 May; Bear Paw Mts, S of Havre, HILL Co, NE, 3 Jun (all SJK). C. eurytheme, CHOUTEAU, LIBERTY, PARK, STILLWATER, TOOLE Counties, 28 May - 21 Aug (all SJK); female captured in copula with male C. meadii, Beartooth Plateau, 10,000', Carbon Co, Aug 6, 1985 (F/JP). C. alexandra, Pryor Mts, BIG HORN Co, 14 Aug; Pike Crk Rd, PONDERA Co, 25 Jun (both SJK). C. meadii, 7 mi NW of Bannock Pass, BEAVERHEAD Co, SW, 22 Jul; Humbug Spires, SILVER BOW Co, 24 Jul (both SJK). L. phlaeas, above Fairy Lake, Bridger Mts, GALLATIN Co, 11 Aug; Humbug Spires, SILVER BOW Co, 24 Jul; above Mystic Lake, STILLWATER Co, 15 Aug (all SJK). L. cupreus, Highwood Mts, CHOUTEAU Co, NE, 28 May; Little Snowy Mts, GOLDEN VALLEY Co, 29 May; below Highland Lookout, E of Feeley, SILVER BOW Co, 24 Jul; above Mystic Lake, STILLWATER Co, 15 Aug (all SJK). L. xanthoides, 5 mi SW of Bell Crk, POWDER RIVER Co, 10 Jul 1985 (SLE). L. editha, Pryor Mts, BIG HORN Co, SE, 14 Aug; Meadow Peak Lookout Rd, E of Happs Inn, LINCOLN Co, NW, 6 Aug; below Highland Lookout, E of Feeley, SILVER BOW Co, 24 Jul (all SJK). L. hyllus, SE of Ekalaka, CARTER Co, SE, 20 Aug; 14 mi E of Glendive, DAWSON Co, 20 Aug; N of Baker, FALLON Co, 20 Aug; nr Chester, LIBERTY Co, 18 Aug; Little Rocky Mts, nr Zortman, PHILLIPS Co, 19 Aug; Teton Rvr, N of Collins, TETON Co, 18 Aug; Devon, TOOLE Co, 18 Aug; N of Wibaux, WIBAUX Co, 20 Aug (all SJK). L. heteronea, Pryor Mts, BIG HORN Co, EAST, 14 Aug (SJK). L. helloides, Pryor Crk, W of Pryor, BIG HORN Co, 14 Aug; Meadow Peak Lookout Rd, E of Happs Inn, LINCOLN Co, NW, 6 Aug; S of Conrad, PONDERA Co, 18 Aug; E of Ashland, POWDER RIVER Co, 20 Aug; Florence, RAVALLI Co, 23 Aug 1985; S of Forsyth, ROSEBUD Co, 6 Jun; Teton Rvr, N of Collins, TETON Co, 18 Aug (all SJK). H. titus, N of Baker, FALLON Co, 20 Aug; Bear Paw Mts, S of Havre, HILL Co, 19 Aug; nr Chester, LIBERTY Co, 18 Aug; Little Rocky Mts, nr Zortman, PHILLIPS Co, 19 Aug; S of Conrad, PONDERA Co, 18 Aug; E of Ashland, POWDER RIVER Co, 20 Aug; Teton Rvr, N of Collins, TETON Co, 18 Aug; N of Wibaux, WIBAUX Co, 20 Aug (all SJK). S. fuliginosum, 7 mi NW of Bannock Pass, BEAVERHEAD Co, SW, 22 Jul (SJK). S. sylvinus and S. saepium, Meadow Peak Lookout Rd, E of Happs Inn, LINCOLN Co, NW, 6 Aug (both SJK). M. siva, Missouri Rvr Breaks, C M Russell Refuge, FERGUS Co, 10 Jun; SW of Wibaux, WIBAUX Co, 5 Jun (both SJK). I. augustinus, 1 mi W of Big Hole Battlefield, BEAVERHEAD Co, SW, 27 May (SJK). I. mossii schryverii, 1 mi W of Big Hole Battlefield, BEAVERHEAD Co, SOUTH, 27 May (SJK). I. polios, nr Wisdom, BEAVERHEAD Co, SW, 27 May; E of Canyon Ferry, BROADWATER Co, 9 Jun; Highwood Mts, CHOUTEAU Co, 28 May; Highwood Mts, JUDITH BASIN Co, 28 May; W Fk Stillwater Rvr, SW of Nye, STILLWATER Co, 7 Jun; Roberts Crk, W of Judith Gap, WHEATLAND Co, 30 May (all SJK). I. eryphon, Highwood Mts, CHOUTEAU Co, NE, 28 May; E of Warm Springs, DEER LODGE Co, 13 Jun; S of Forsyth, ROSEBUD Co, 6 Jun (all SJK). S. melinus, above Fairy Lk, Bridger Mts, GALLATIN Co, 11 Aug; nr Chester, LIBERTY Co, 18 Aug; Little Rocky Mts, nr Zortman, PHILLIPS Co, 19 Aug; S of Conrad, PONDERA Co, 18 Aug; Devon, TOOLE Co, 18 Aug; nr Ft Peck, VALLEY Co, 19 Aug; N of Wibaux, WIBAUX Co, 20 Aug (all SJK). E. amyntula, Little Snowy Mts, GOLDEN VALLEY Co, 29 May (SJK). C. argiolus (ladon), Little Snowy Mts, GOLDEN VALLEY Co, 29 May; Highwood Mts, JUDITH BASIN Co, 28 May (both SJK). E. enoptes, Bear Paw Mts, S of Havre, HILL Co, NE, 3 Jun (SJK). C. piusius, Bear Paw Mts, nr Lloyd, BLAINE Co, NE, 4 Jun; W Fk Stillwater Rvr, SW of Nye, STILLWATER Co, 7 Jun (both SJK). G. lydamus, Bear Paw Mts, nr Lloyd, BLAINE Co, 4 Jun; Little Snowy Mts, GOLDEN VALLEY Co, 29 May (both SJK). P. idas, Pryor Mts, BIG HORN Co, EAST, 14 Aug (SJK). P. melissa, Sweetgrass Hills, E of Whitelash, LIBERTY Co, 22 May (SJK); now known from all but Sanders Co. P. saepiolus,

Timber Crk, 30 mi W of Circle, McCONE Co, 4 Jun; nr Glasgow, VALLEY Co, 4 Jun; Roberts Crk, W of Judith Gap, WHEATLAND Co, 30 May (all SJK). *P. icarioides*, Bear Paw Mts, nr Lloyd, BLAINE Co, NE, 4 Jun (SJK); Pike Crk Rd, PONDERA Co, 24 Jun (SJK); 5 mi SW of Bell Crk, POWDER RIVER Co, 10 Jul 1985 (SLE). *P. glandon*, Pike Crk Rd, PONDERA Co, 25 Jun; E of Feeley, SILVER BOW Co, 13 Jun (both SJK). *E. claudia*, 7 mi NW of Bannock Pass, BEAVERHEAD Co, SW, 22 Jul; N of Baker, FALLON Co, 20 Aug; nr Chester, LIBERTY Co, 18 Aug; Livingston, PARK Co, 11 Aug; S of Conrad, PONDERA Co, 18 Aug; Teton Rvr, N of Collins, TETON Co, 18 Aug; Marias Rvr, S of Shelby, TOOLE Co, 18 Aug; nr Ft Peck, VALLEY Co, 19 Aug; N of Wibaux, WIBAUX Co, 20 Aug (all SJK). *S. aphrodite*, nr Chester, LIBERTY Co, 18 Aug (SJK). *S. cybele*, 5 mi E of Ekalaka, CARTER Co, 10 Jul 1985 (SLE); 5 mi SW of Bell Crk, POWDER RIVER Co, 10 Jul 1985 (SLE); W Fk Rosebud Rvr, Mystic Lk Rd, STILLWATER Co, 15 Aug (SJK). *S. edwardsii*, 14 mi E of Glendive, DAWSON Co, 20 Aug; N of Baker, FALLON Co, 20 Aug; Bear Paw Mts, S of Havre, HILL Co, 19 Aug; S of Conrad, PONDERA Co, 18 Aug; Teton Rvr, N of Collins, TETON Co, 18 Aug; Bighorn, TREASURE Co, 21 Aug; N of Wibaux, WIBAUX Co, 20 Aug (all SJK). *S. zereene*, Little Rocky Mts, nr Zortman, PHILLIPS Co, NE, 19 Aug; Bighorn, TREASURE Co, 21 Aug (both SJK). *S. callippe*, 5 mi SW of Bell Crk, POWDER RIVER Co, 10 Jul 1985 (SLE). *S. egleis*, Pryor Mts, BIG HORN Co, EAST, 14 Aug (SJK). *S. atlantis*, SE of Ekalaka, CARTER Co, SE, 20 Aug; nr Chester, LIBERTY Co, 18 Aug; Bighorn, TREASURE Co, 21 Aug (all SJK). *S. hydaspes*, Pryor Mts, BIG HORN Co, SE, 14 Aug; Bear Paw Mts, S of Havre, HILL Co, NE, 19 Aug; Meadow Peak Lookout Rd, E of Happys Inn, LINCOLN Co, NW, 6 Aug (all SJK). *S. mormonia*, Little Rocky Mts, nr Zortman, PHILLIPS Co, NE, 19 Aug; S of Forsyth, ROSEBUD Co, EAST, 21 Aug; NE of Pryor, YELLOWSTONE Co, 6 Jun EARLY (all SJK). *B. eunomia*, 7 mi NW of Babb, GLACIER Co, NORTH and 1st record from N MT, 26 Jun (SJK). *B. selene*, Pryor Crk, W of Pryor, BIG HORN Co, 14 Aug; SE of Ekalaka, CARTER Co, SE, 20 Aug (both SJK). *B. bellona*, Highwood Mts, CHOUTEAU Co, 28 May; Little Snowy Mts, GOLDEN VALLEY Co, SOUTH, 29 May; Little Rocky Mts, nr Zortman, PHILLIPS Co, EAST, 19 Aug; Roberts Crk, W of Judith Gap, WHEATLAND Co, SOUTH, 30 May (all SJK). *B. kriemhild*, W Fk Stillwater Rvr, SW of Nye, STILLWATER Co, 7 Jun (SJK); first new record in several years. *B. epithore*, Bear Paw Mts, nr Lloyd, BLAINE Co, EAST, 4 Jun (SJK); Monarch Cn, CASCADE Co, 5 Jul 1985 (F/JP). *B. frigga*, 2 mi S of Port of Chief Mtn, GLACIER Co, STATE, 26 Jun (SJK). *C. acastus*, Timber Crk, 30 mi W of Circle, McCONE Co, 4 Jun; nr Sidney, RICHLAND Co, 6 Jun; SW of Wibaux, WIBAUX Co, 5 Jun (all SJK). *C. damoetas*, Pike Crk Rd, PONDERA Co, NE, 25 Jun (SJK). *P. tharos* COMPLEX, nr Chester, LIBERTY Co, 18 Aug; nr Sidney, RICHLAND Co, 6 Jun (both SJK); now known from all but Jefferson Co. *P. pratensis (campestris)*, Pryor Mts, BIG HORN Co, 14 Aug (SJK). *E. anicia*, Bear Paw Mts, nr Lloyd, BLAINE Co, NE, 4 Jun; Little Snowy Mts, GOLDEN VALLEY Co, 29 May; Bear Paw Mts, S of Havre, HILL Co, 3 Jun; Humburg Spires, SILVER BOW Co, 24 Jul (all SJK). *E. editha*, Bear Paw Mts, nr Lloyd, BLAINE Co, 4 Jun; Highwood Mts, CHOUTEAU Co, 28 May; Pike Crk Rd, PONDERA Co, 25 Jun; W Fk Stillwater Rvr, SW of Nye, STILLWATER Co, 7 Jun (all SJK). *P. satyrus*, Bear Paw Mts, S of Lloyd, BLAINE Co, 19 Aug; Bear Paw Mts, S of Havre, HILL Co, 19 Aug; Little Rocky Mts, nr Zortman, PHILLIPS Co, NE, 19 Aug; W of Heart Butte, PONDERA Co, 22 May; S of Forsyth, ROSEBUD Co, EAST, 21 Aug; Teton Rvr, N of Collins, TETON Co, 18 Aug (all SJK). *P. faunus*, Bear Paw Mts, S of Lloyd, BLAINE Co, 19 Aug; Highwood Mts, CHOUTEAU Co, 28 May; Bear Paw Mts, S of Havre, HILL Co, 19 Aug; Little Rocky Mts, nr Zortman, PHILLIPS Co, NE, 19 Aug; S of Conrad, PONDERA Co, 18 Aug; S of Forsyth, ROSEBUD Co, SE, 21 Aug; Teton Rvr, N of Collins, TETON Co, 18 Aug; Bighorn, TREASURE Co, 21 Aug (all SJK). *P. zephyrus*, Bear Paw Mts, S of Havre, HILL Co, 19 Aug; nr Chester, LIBERTY Co, 18 Aug; Little Rocky Mts, nr Zortman, PHILLIPS Co, NE, 19 Aug; S of Conrad, PONDERA Co, 18 Aug; Teton Rvr, N of Collins, TETON Co, 18 Aug (all SJK). *P. oreas*, Meadow Peak Lookout Rd, E of Happys Inn, LINCOLN Co, NW, 6 Aug (SJK). *N. vau-album*, Meadow Peak Lookout Rd, E of Happys Inn, LINCOLN Co, NW, 6 Aug (SJK). *N. antiopa*, BLAINE, DAWSON, FALLON, McCONE, PONDERA, VALLEY, WIBAUX Counties, 4 Jun - 20 Aug (all SJK); now known from all but Prairie Co. *N. milberti*, CARTER, DAWSON, FALLON, HILL, PHILLIPS, PONDERA, POWDER RIVER, TETON, VALLEY, WIBAUX Counties, 24 Jun - 20 Aug (all SJK). *V. virginianensis*, Bear Paw Mts, nr Lloyd, BLAINE Co, 2nd STATE, NORTH and 1st record in N MT, 4 Jun (SJK). *V. cardui*, BLAINE, FALLON, HILL, LIBERTY, PHILLIPS, TOOLE Counties, 3 Jun - 20 Aug (all SJK); now all MT counties. *V. carye annabella*, Pryor Mts, BIG HORN Co, 14 Aug; Bear Paw Mts, S of Lloyd, BLAINE Co, 19 Aug; E of Marias Pass, GLACIER Co, NORTH, 24 Jun; Bear Paw Mts, S of Havre, HILL Co, 19 Aug; nr Chester, LIBERTY Co, 18 Aug; S of Livingston, PARK Co, 21 Aug; Little Rocky Mts, nr Zortman, PHILLIPS Co, NE, 19 Aug; Pike Crk Rd, PONDERA Co, 24 Jun; S of Forsyth, ROSEBUD Co, 21 Aug; W Fk Rosebud Rvr, Mystic Lk Rd, STILLWATER Co, 15 Aug; Teton Rvr, N of Collins, TETON Co, 18 Aug; Devon, TOOLE Co, 18 Aug (all SJK); this nearly doubles the number of known records for this usually rare species. *V. atalanta*, BLAINE, FALLON, HILL, PARK, PHILLIPS, PONDERA, POWDER RIVER, STILLWATER, WIBAUX Counties, 15-21 Aug (all SJK). *E. archippus*, Hardin, BIG HORN Co, 10 Sep 1971 (JLH). *C. haydenii*, W Fk Stillwater Rvr, SW of Nye, STILLWATER Co, 7 Jun (SJK); first new record in many years. *C. tullia inornata*, Little Snowy Mts, FERGUS and GOLDEN VALLEY Counties, 29 May; E of Harlowton, WHEATLAND Co, 9 Jun (all SJK). *C. pegala*, S of Mosby, PETROLEUM Co, 27 Aug 1985 (SJK); now all MT counties. *C. meadii*, SE of Ekalaka, CARTER Co, SE, 20 Aug; N of Baker, FALLON Co, 20 Aug; S of Forsyth, ROSEBUD Co, 21 Aug; Bighorn, TREASURE Co, 21 Aug (all SJK). *C. oetus*, 5 mi E of Ekalaka, CARTER Co, SE, 10 Jul 1985 (SLE); nr Chester, LIBERTY Co, 18 Aug (SJK). *E. epipsodea*, Little Snowy Mts, GOLDEN VALLEY Co, 29 May; NE of Pryor, YELLOWSTONE Co, SE, 6 Jun (both SJK). *E. callias*, above Mystic Lake, STILLWATER Co, 2nd STATE, NORTH, 15 Aug (SJK). *N. ridingsii*, 1 mi NE of Drummond, GRANITE Co, 13 Jun; E of Deer Lodge, POWELL Co, 13 Jun; 3 mi N of Melrose, SILVER BOW Co, 13 Jun (all SJK). *O. chryxus*, E of Nye, STILLWATER Co, 11 Jun (SJK). *O. uhleri*, nr Wisdom, BEAVERHEAD Co, SW, 27 May; E of Flatwillow, PETROLEUM Co, 10 Jun; 3 mi N of Melrose, SILVER BOW Co, 13 Jun; W Fk Stillwater Rvr, SW of Nye, STILLWATER Co, 7 Jun (all SJK). *O. alberta*, Highwood Mts, CHOUTEAU Co, 28 May; Roberts Cr, W of Judith Gap, WHEATLAND Co, SW, 30 May (both SJK). *O. jutta*, SE of Hungry Horse, FLATHEAD Co, 24 Jun; E of Marias Pass, GLACIER Co, NORTH, 24 Jun; Vann Lk Rd, nr Condon, LAKE Co, 23 Jun; Pike Crk Rd, PONDERA Co, NE, 24 Jun (all SJK).

WYOMING. Contributors: GTA, BFC, DLE, SLE, CDF, CFG, JLH, PAO, RCR, JAS, RES, EHW. The early season was advanced and dry (BFC), but later on it was about normal (PAO, RES).

BUTTERFLIES: Received were 187 data points representing 98 species and 95 county records (for 67 species). There were no state records in 1986, and no additional species were recorded from all WY counties (the total stands at *protodice*, *philodice* and *P. melissa*). *T. pylades*, 3 mi SW of Rozet, CAMBELL Co, 15 Jun (PAO). *E. afranius*, 25 mi N of Glenrock, CONVERSE Co, 1985 and 1986; Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (both BFC). *E. persius*, Happy Jack Rd 7500', 25.3 mi W of Cheyenne, LARAMIE Co, 26 May (PAO, RES); Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *P. ruralis*, Casper Mtn, 3-6 mi S of Casper, NATRONA Co, May-Jun '86 (BFC). *P. communis*, Casper Mtn, 3-6 mi S of Casper, NATRONA Co, 1985 and 1986 (BFC); now known from all but Park Co. *P. pirus*, LINCOLN Co, 1985 (CDF). *Y. rhesus*, hilltop N of Hell Gap, 5400', 9 mi NNE of Guernsey, GOSHEN Co, 25 May (RES). *H. juba*, 3 mi SW of Rozet, CAMBELL Co, 15 Jun (PAO). *H. comma*, 10 mi N of Evanston 6700', UINTA Co, 6 Jul 1985 (JLH). *H. pahaska*, 3 mi SW of Rozet, CAMBELL Co, 15 Jun (PAO). *H. nevada*, US 26/287, 6900', 4 mi E of Moran Jct, TETON Co, 30 Jun 1985 (DLE). *P. themistocles*, WY 270, 8 mi N of Hartville, FLATTE Co, 12 Jul 1985 (SLE); US 85 just N of Newcastle 4400', WESTON Co, 1 Jul 1985 (DLE). *P. mytic*, Cheyenne, LARAMIE Co, 4 Jul (PAO). *P. sonora*, 10 mi N of Evanston 6700', UINTA Co, 6 Jul 1985 (JLH, det RES). *O. sylvanoides*, Ft Bridger 6700', UINTA Co, 23 Aug (JLH). *A. hianna*, E of Yellow Pine Cg, Laramie Mts, ALBANY Co, 21 Jun (J Nordin/CDF). *A. simius*, 3 mi SW of Rozet, CAMBELL Co, 15 Jun (PAO). *A. vialis*, Lone Tree Cn 4900', 7 mi WSW of Hawk Spgs, GOSHEN Co, 25 May (RES). *M. streckeri*, 3 mi SW of Rozet, CAMBELL Co, 15 Jun (PAO). *P.*

phoebus, 3 mi SW of Rozet, CAMPBELL Co, 15 Jun (PAO). *P. polyxenes*, Trail Lk Rch, 21 Jun 85; Whiskey Mtn 9500', 2 Jul 86, both FREMONT Co, WEST (both BFC); Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *P. zelicaon*, Lone Tree Cn 4900', 7 mi WSW of Hawk Spgs, GOSHEN Co, 25 May (PAO, RES); Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *P. indra*, Whiskey Mtn 10000', HIGH ALT, Fremont Co, 2 Jul (BFC). *P. eurymedon*, Torrey Crk, Trail Lk Rch and Union Pass, FREMONT Co, '85 and '86; Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (all BFC). *P. multicaudatus*, Thermopolis, HOT SPRINGS Co, Aug '85 and '86 (BFC); US 85 N of Newcastle 4400', WESTON Co, 1 Jul 1985 (DLE). *P. beckerii*, Trail Lk Rch and Union Pass, FREMONT Co, Jun-Jul '85 and '86 (BFC). *P. occidentalis*, 3 mi SW of Rozet, CAMPBELL Co, 15 Jun (PAO); Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *P. napi*, Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *A. sara*, Pine Ridge, 25 mi N of Glenrock, CONVERSE Co, EAST, '85 and '86; Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (both BFC). *E. ausonides*, S of Camel Crk Cg, Converse Co, 27 July LATE (RCR); Happy Jack Rd 7500', 25.3 mi W of Cheyenne, LARAMIE Co, 26 May (PAO, RES); Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *E. olympia*, Casper Mtn, 3-6 mi S of Casper, NATRONA Co, WEST, '85 and '86 (BFC). *C. scudderii*, S of Camel Crk Cg, Converse Co, 27 Jul (RCR). *L. heteronea*, Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *L. dorcas* (sensu Ferris), Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *C. sheridanii*, Happy Jack Rd, 21.5 mi W of Cheyenne, LARAMIE Co, 29 Mar (PAO). *M. siva*, 3 mi SW of Rozet, CAMPBELL Co, 15 Jun (PAO). *I. mossii schryveri*, Happy Jack Rd, 21.5 mi W of Cheyenne, LARAMIE Co, 29 Mar (PAO); Pine Mtn, 25 mi W of Casper, NATRONA Co, NW, mid-Apr to mid-May '85 and early-Apr to early-May '86 (BFC). *I. eryphon*, Sand Draw 4800', 4.8 mi N of Ft Laramie, GOSHEN Co, 25 May (PAO, RES); Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *S. melinus*, Terry Rd exit, I-25, LARAMIE Co, 23 Jun (JAS). *H. isola*, Pine Ridge, 25 mi N of Glenrock, CONVERSE Co, 23 May (BFC); Lone Tree Cn 4900', 7 mi WSW of Hawk Spgs, GOSHEN Co, 25 May (RES); Terry Rd exit, I-25, LARAMIE Co, 23 Jun (JAS); Pine Mtn, 25 mi W of Casper, NATRONA Co, 22 May (BFC). *E. amyntula*, Happy Jack Rd, 25.3 mi W of Cheyenne, LARAMIE Co, 26 May (PAO). *C. argiolus* (=ladon), 23 mi W of Cheyenne 7600', LARAMIE Co, 3 May (PAO). *E. enoptes*, 3 mi SW of Rozet, CAMPBELL Co, 15 Jun (PAO); Trail Lk, FREMONT Co, Jun-early Jul '85 and '86 (BFC). *E. rita*, Terry Rd exit, I-25, LARAMIE Co, 23 Jun, EARLY (JAS). *G. lydamus*, WY 159, 14.4 mi N of Torrington, 4550', GOSHEN Co, 25 May (RES); Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *P. saepiolus*, Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *P. glandon rustica*, Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *P. acmon*, Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *E. claudia*, common in '85 and very common in '86, Wind Rvr and Absaroka Mts, FREMONT Co (BFC); all over NATRONA Co, '85 and '86 (BFC); Beartooth Hwy 9800', Park Co, 7 Aug (EHW). *S. cybele leto*, Esterbrook to Friend Rd, Converse Co, SOUTH, 26 Jul (RCR). *S. zerebe*, Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *S. callippe*, 3 mi SW of Rozet, CAMPBELL Co, 15 Jun (PAO). *S. atlantis*, Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *E. improba*, Sandra Lake, SUBLETTE Co, WEST, '85 and '86 (BFC). *B. bellona*, US 26/287, 4 mi E of Moran Jct 6900', TETON Co and important new NW "filler" record, 30 Jun 1985 (DLE). *E. gilletti*, several new colonies found in northern Wind Rvr Mts, Fremont Co, in Jun-Jul '85, but none seen in '86 (BFC); question to EHW: could these be biennial populations?; Park Co populations down in '86 (EHW). *E. anicia*, Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *C. acastus*, 3 mi SW of Rozet, CAMPBELL Co, 15 Jun (PAO). *C. palla*, N Wind Rvr Mts, FREMONT Co, late Jun - early Jul; Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (all BFC). *P. tharos* (A), Green Rvr Crossing, US 187, SWEETWATER Co, 18 Jul 1976 (R LaVigne/CDF, det PAO). *P. selenis* (tharos B, incorrectly referred to *pascoensis*), S of Camel Crk Cg, Converse Co, 27 Jul; La Bonte Cn, Albany Co, 27 Jul (both RCR). *P. pallida*, Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *P. faunus*, 1.2 mi SE of Green Rvr Lks Cg 8000', SUBLETTE Co, 10 Aug 1985 (CFG). *N. antiopa*, Sand Draw 4800', 4.8 mi N of Ft Laramie, GOSHEN Co, 25 May (RES). *N. milberti*, 3 mi SW of Rozet, CAMPBELL Co, 15 Jun (PAO); Lone Tree Cn 4900', 7 mi WSW of Hawk Spgs, GOSHEN Co, 25 May (RES); Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *V. atalanta*, Lone Tree Cn 4900', 7 mi WSW of Hawk Spgs, GOSHEN Co, 25 May (PAO, RES); Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *V. virgininesis*, Lone Tree Cn 4900', 7 mi WSW of Hawk Spgs, GOSHEN Co, 25 May (PAO); Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC); 0.5 mi SE of Green Rvr Lks Cg 8000', SUBLETTE Co, 10 Aug 1985 (CFG). *E. magdalena*, E flank of Mather Peak 11500', BIG HORN Co, 11 Aug (R Royer/CDF). *N. ridingsii*, SWEETWATER Co, 1985 (GTA). *O. uhleri*, Hell Gap 5100', 9 mi NNE of Guernsey, GOSHEN and PLATTE Counties, 25 May (PAO, RES); Happy Jack Rd 7200', 21.5 mi W of Cheyenne, LARAMIE Co, 26 May (PAO, RES); Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *O. chryxus*, Casper Mtn, 3-6 mi S of Casper, NATRONA Co, '85 and '86 (BFC). *O. taygete* (bore), above 11000', Wind River Mtns, SUBLETTE and Fremont Counties, '85 and '86 (BFC). *D. plexippus*, many seen nr Dubois, FREMONT Co, '85 and '86 (BFC).
MOTHS: *Hyalophora gloveri*, Trail Lk Rch, Fremont Co, '85 and '86; Casper Mtn, Natrona Co, Jun '86 (both BFC). *Anthera polyphemus*, Trail Lk Rch, FREMONT Co, 1-2 Jul (BFC). *Hemileuca eglanterina*, Torrey Vy, Fremont Co, July '85 and '86 (BFC). *H. nuttali*, Torrey Vy, Fremont Co, late Jul; S of Thermopolis, HOT SPRINGS Co, Aug (both BFC). *H. hera*, Torrey Vy, Fremont Co, July '85 and '86 (BFC); Glenrock vcy, Converse Co, 23 Aug 1985 (RCR). *Hemaris senta*, Pine Mtn, 25 mi W of Casper, NATRONA Co, '85 and '86; Wind Rvr Mts, Fremont Co, late Jun '86 (both BFC). *Hemaris thysbe*, few taken along with many *H. diffinis*, Cook Lk, Crook Co, 25 May 1985 (RCR). *Smerinthus cerisyi*, common in Wind Rvr and Absaroka Mts, Fremont Co, mid-Jun through Jul '85 and '86 (BFC). *Sphinx vashti*, Trail Lk Rch, Wind Rvr Mts, Fremont Co, late-Jun through early Jul '85 and '86 (BFC). *Hyles lineata*, Converse, Fremont and NATRONA Counties (BFC). *H. gallii*, Trail Lk Rch, Fremont Co, 12 Jul (BFC). *Erinnyis ello*, Trail Lk Rch, FREMONT Co, STATE, 16 Jul (BFC). *Bruceia pulverina*, Torrey Vy, FREMONT Co, July '85 and '86 (BFC). *Turuptiana permaculata*, Wind Rvr and Absaroka Mts, Fremont Co, two generations, late Jun - mid July and mid-late Aug (BFC). *Apantesis williamsi*, Wind Rvr Mts, Fremont Co, Jul '85 and '86 (BFC). *A. blakei*, Trail Lk Rch, Fremont Co, late Jun - early Jul '85 and '86 (BFC). *A. phyllira* and *A. proxima*, Trail Lk Rch, Fremont Co, Jul '85 and '86 (BFC). *A. nevadensis*, Wind Rvr and Absaroka Mts, Fremont Co, Jul-Aug '85 and '86 (BFC). *Diacrisia vagans*, Wind Rvr and Absaroka Mts, Fremont Co, Jul-Aug '85 and '86 (BFC). *Arctia caia*, common, Fitzpatrick Wilderness Area, Fremont Co, Jul - mid Aug '85 and '86 (BFC). *Halisdota maculata*, Wind Rvr and Absaroka Mts, Fremont Co, Jul-Aug '85 and '86 (BFC). *Pararctia lapponica*, Ram Flat 11200', Fitzpatrick Wilderness Area, FREMONT Co, 2 STATE, 30 Jun (BFC). *Gnophaela vermiculata*, Camel Crk Cg, Converse Co, 27 Jul (RCR); common in Wind Rvr and Absaroka Mts, Fremont Co, '85 and '86 (BFC). *Cossus undosus*, Trail Lk Rch, Wind Rvr Mts, 1 Jun; East Fk Lodge, Absaroka Mts, 18 Aug, both FREMONT Co (BFC). *Alypia mac-cullochi*, Wind Rvr Mts, Fremont Co, late Jun - early Jul '85 and '86 (BFC). *Catocala briseis* and *C. proteiana*, Trail Lk Rch, Fremont Co, Aug '85 and '86 (BFC). *Harypia occidentalis* and *Pheosia rimosa*, Trail Lk Rch, Fremont Co, Jul '85 and '86 (BFC).

UTAH. Contributors: GBG, JLH, JMJ, P/SS, SWS, RES. It was a very warm and early season (P/SS), and from the volume of data received it must have been a good one. My own experience in May and June was fabulous weather with high rivers and some flooding.

BUTTERFLIES: I received 277 data points and 255 county records for 106 species, which is even better than last year. There was one state record (*J. nigrosuffusa*), and only Salt Lake and Utah counties had no new county records. It is unfortunate that CFG has asked me to stop using his statistical totals for Utah, because the state went over 100 average species per county in 1986. Using only my own totals, which include those from all sources for which I have full data, the current average is 92.55 sp/co. Also, as in previous years, the listed STATE and COUNTY records do not

take into consideration earlier CFG and other records for which I do not have data. The records reproduced here represent the first published records as indicated. I now show 14 species from all UT counties (CFG has at least 37, but he steadfastly refuses to share his data). E. clarus, US 6, 4.5 mi NW of Helper 6200', CARBON Co, 22 Jun (JLH); mouth of Farmington Cn 4800', DAVIS Co, 26 Jun (SWS); Levan 5300', JUAB Co, 22 Jun (SWS); Oak City 5100', MILLARD Co, 25 Jul (JLH); Gunnison 5100', SANPETE Co, 4 Jul (JLH). T. mexicana, 10.1 mi S of Morgan, MORGAN Co, 11 Jun (RES). E. brizo, 5.5 mi NE of Castle Gate 6800', CARBON Co, 12 Jun (RES); Taylor Cn 5000', WEBER Co, 15 Apr (JLH). E. telemachus, 3.3 mi NE of Castle Gate 6600', CARBON Co, 12 Jun; 10.1 mi S of Morgan, MORGAN Co, 11 Jun (both RES). E. pacuvius, (verified), Castle Crk at road xing 7100', GRAND Co, 13 Jul; Whiterock Rvr Rd at Red Pine Cn 7300', UINTEA Co, 26 May; Singletree Cg, 10.5 mi SE of Torrey 8200', WAYNE Co, 2 Jul (all JLH). E. afranius, mouth of Farmington Cn 4800', DAVIS Co, 24 May; N Slope Rd at Spring Crk 8600', WAYNE Co, 19 Jul (both JLH, det RES). E. persius, 6.9 mi N of Neola 6800', DUCHESNE Co, 18 May 1985; 1.2 mi SSE of Rex Peak, Crawford Mts, RICH Co, 19 May 1985 (both JLH, det RES). P. scriptura, UT 199 at Willow Spgs 5100', TOOLE Co, 23 Jun 1985 (JLH). P. communis, 2 mi S of Beaver 6000', BEAVER Co, 22 May; 3 mi N of Donner Spg 4300', E side Pilot Rg, BOX ELDER Co, 3 May; Price 5600', CARBON Co, 18 May; 6.9 mi N of Neola 6800', DUCHESNE Co, 30 Jun 1985; 1.7 mi SE of Mountain Green 5000', MORGAN Co, 24 May; Warner Hollow 7300', 1.2 mi SSE of Rex Peak, RICH Co, 19 May 1985; Gunnison 5100', SANPETE Co, 12 Aug 1985; Venice 5200', SEVIER Co, 12 Aug 1985 (all JLH); now all UT counties. H. ericetorum, Cedar Mtn Rd 6800', 24 mi S of Price, EMERY Co, 22 Jun 1985 (JLH). P. catullus, S side of Beaver 5800', BEAVER Co, 26 Jul (JLH); Clear Creek Cn, 5.5 mi S of jct Yost Rd, Raft River Mts, BOX ELDER Co, 1 Jun (RES); Price 5600', CARBON Co, 4 Jul 1985 (JLH); Salina 5150', SEVIER Co, 28 Jul (JLH). P. pirus, Lodgepole Cn 7000', 2.8 mi E of Elk Vy guard station, CACHE Co, 6 Jul 1985 (SWS); 7.4 mi N of Neola 6900', DUCHESNE Co, 30 Jun 1985 (JLH). O. garita, 6.9 mi N of Neola 6800', DUCHESNE Co, 16 Jun 1985 (JLH); 2.7 mi W of Morgan, MORGAN Co, 11 Jun (RES); 1 mi S of jct UT 24/UT 25, 8300', PIUTE Co, 6 Jul (JLH); Midway 5800', Wasatch Mtn St Park, WASATCH Co, 26 Jun (JLH). H. juba, 0.9 mi W of jct UT 69/UT 83, Brigham City 4300', BOX ELDER Co, 5 Oct 1983 (JLH); Coal Creek 6500', 11.5 mi N of Wellington, CARBON Co, 17 May (JLH); Rilda Cn 7000', 10 mi NW of Huntington, EMERY Co, 18 May (JLH); 10.1 mi S of Morgan, MORGAN Co, 11 Jun (RES); 0.1 mi W of St Line 6600', 1.4 mi N of NW corner Uinta Co, WY, RICH Co, 9 Jun 1985 (JLH); Johnson Crk Rd at Johnson Crk 7700', SAN JUAN Co, 29 May (JLH); Cedar Pockets Wash 4100', 12 mi SW of St George, WASHINGTON Co, 23 Apr 1984 (JLH, det W.W. McGuire). H. uncas, Cedar Mtn Rd 6500', EMERY Co, 22 Jun 1985; summit UT 20, 7900', W side of Buckskin Vy, IRON Co, 5 Jul (both JLH). H. comma harpalus, Dry Cn 6600', 4.7 mi NNE of Helper, CARBON Co, 18 Aug; Blowout Hollow 6900', Iron Mtn, IRON Co, 27 Jul; Second Creek 6250', 9 mi SE of Kanosh, MILLARD Co, 26 Jul; UT 65, 6000', 1.1 mi W of E Cn Rd, MORGAN Co, 11 Aug (all JLH). H. pahaska, Cedar Mtn Rd 6700', EMERY Co, 22 Jun 1985 (JLH, det RES); 1.2 mi W of UT 62, 7100', 5 mi SSW of Greenwich, PIUTE Co, 18 Jun 1983 (JLH, det W.W. McGuire); 5.3 mi N of Whiterocks 6900', UINTEA Co, 30 Jun 1985 (JLH, det RES). H. nevada, 1.6 mi W of Currant Crk at US 40, 7600', WASATCH Co, 11 Jun 1983 (JLH, det W.W. McGuire). P. sabuleti, S side of Beaver 5800', BEAVER Co, 25 Aug (JLH); Manila 6350', DAGGETT Co, 23 Aug (JLH); Cedar City 5800', IRON Co, 26 Aug (JLH); 2.7 mi W of Morgan, MORGAN Co, 11 June (RES); E side of Gunnison 5100', SANPETE Co, 2 Aug (JLH); N side of Salina 5200', SEVIER Co, 2 Aug (JLH); Torrey 6800', WAYNE Co, 17 Aug (JLH). P. draco, 13.5 mi W of Woodruff 7600', RICH Co, 12 Jun (JLH). P. sonora, Pine Vy Rsvr 6700', WASHINGTON Co, 29 Aug (JLH). O. sylvanoides, Baker Cn 6400', 5.5 mi E of Beaver, BEAVER Co, 26 Jul (JLH); Dry Cn 6600', 4.4 mi NNE of Helper, CARBON Co, 28 Jul 1985 (JLH); Farmington Cn 5000', DAVIS Co, 24 Jul (JLH); 0.4 mi W of Tabiona 6600', DUCHESNE Co, 10 Aug (JLH); Huntington Cn 7200', 13.2 mi NW of Huntington, EMERY Co, 27 Jul 1985 (JLH, SWS); Castle Crk 7100', 4.2 mi NNW of Mt Waas, GRAND Co, 4 Aug (JLH); E side of Nephi 5200', JUAB Co, 2 Aug (JLH); Corn Crk 5700', 6.1 mi SE of Kanosh, MILLARD Co, 26 Jul (JLH); S end of E Cn Rsvr 5700', MORGAN Co, 9 Aug (JLH); Woodruff 6300', RICH Co, 9 Aug (JLH); Gunnison 5200', SANPETE Co, 2 Aug (JLH); N side of Salina 5200', SEVIER Co, 2 Aug (JLH). P. taxiles, Salina 5150', SEVIER Co, 4 Jul; Torrey 6800', WAYNE Co, 3 Jul (both JLH). P. phoebus, 6.6 mi N of Neola 6800', DUCHESNE Co, 31 May (RES). P. polyxenes coloro, several small larvae on T. montana, later reared to pupae, Beaver Dam Wash nr Lytle Rch, Washington Co, 20 Sep (JMJ). P. bairdii f. brucei, UT 46 at Wray Mesa Rd 6900', SAN JUAN Co, 4 Aug (JLH). P. zeliccaon, hill 14.6 mi NNW of Neola 8000', DUCHESNE Co, 31 May (RES); ridge NE of Taylor Flat 8900', 6.4 mi ENE of Mt Waas, GRAND Co, 1 Jul (JLH). P. rutulus, 5.5 mi NE of Castle Gate 6800', CARBON Co, 12 Jun (RES); mouth of Farmington Cn 4800', DAVIS Co, 16 Jun (JLH); 10.4 mi N of Neola 7400', DUCHESNE Co, 31 May (RES); Castle Crk 7100', 4.2 mi NNW of Mt Waas, GRAND Co, 1 Jul (JLH); 10.1 mi S of Morgan, MORGAN Co, 11 Jun (RES); Laketown Rsvr 6100', 1.8 mi SSE of Laketown, RICH Co, 28 Jun (SWS); now all UT counties. P. eurymedon, ridge NE of Taylor Flat 8900', 6.4 mi ENE of Mt Waas, GRAND Co, 1 Jul; La Sal Crk 8300', 5.5 mi NNW of La Sal, SAN JUAN Co, 30 Jun; S Fk Ogden Rvr Cg 5300', WEBER Co, 12 Jun (all JLH). P. multicaudatus, Beaver 5900', BEAVER Co, 26 Jul; 0.6 mi N of Wellington 5500', CARBON Co, 22 Jun; Blind Stream 8400', 5.7 mi N of Hanna, DUCHESNE Co, 10 Aug; Gooseberry Spg 7400', Cedar Mtn, EMERY Co, emg 30 Mar (all JLH). P. sisymbrii, 7.7 mi SSW of Lucin 5600', BOX ELDER Co, 3 May (JLH); 6.6 mi N of Neola 6800', DUCHESNE Co, 31 May (RES); NW end of Jerry's Flat 6500', I-70 in San Rafael Swell, EMERY Co, 21 Apr (JLH); mouth of Taylor Cn 5000', E side of Ogden, WEBER Co, 15 Apr (JLH). P. protodice, S end of E Cn Rsvr 5700', MORGAN Co, 9 Aug; S Fk Ogden Rvr Cg 5300', WEBER Co, 31 Jul (both JLH); now all UT counties. P. occidentalis, 0.9 mi W of Mtn Green 4800', MORGAN Co, 15 Apr (JLH). P. napi, Price Rvr 6200', 4.5 mi NW of Helper, CARBON Co, 18 Aug; Second Crk 6300', 9.6 mi SE of Kanosh, MILLARD Co, 26 Jul; 1.8 mi W of Mtn Green 4800', MORGAN Co, 15 Apr; Fish Crk 6900', 3.9 mi SSE of Torrey, WAYNE Co, 16 Aug (all JLH). P. rapae, SE side of Beaver 5900', BEAVER Co, 22 May; Lyman 7100', WAYNE Co, 2 Aug (both JLH); now all UT counties. A. sara, 7.7 mi SSW of Lucin 5600', BOX ELDER Co, 3 May (JLH); hill 14.6 mi NNW of Neola 8000', DUCHESNE Co, 31 May (RES); mouth of Taylor Cn 5000', E side of Ogden, WEBER Co, 15 Apr (JLH). E. ausonides, 10.4 mi N of Neola 7400', DUCHESNE Co, 31 May (RES); 1.8 mi W of Mtn Green 4800', MORGAN Co, 15 Apr (JLH); Fairview Cn 6500', 2 mi NE of Fairview, SANPETE Co, 18 May (JLH). E. hyantis, 3 mi N of Donner Spg 4300', E side Pilot Rg, BOX ELDER Co, 3 May; NW end of Jerry's Flat 6500', I-70 in San Rafael Swell, EMERY Co, 21 Apr (both JLH). C. philodice, S Weber 4500', DAVIS Co, 24 May; Eden 4900', WEBER Co, 12 Jun (both JLH); now all UT counties and the first species to be recorded from all counties in Zone 4. C. eurytheme, 2 mi S of Farmington 4300', DAVIS Co, 31 Jul; S end of E Cn Rsvr 5700', MORGAN Co, 9 Aug; 2.8 mi S of Bicknell 6900', WAYNE Co, 2 Aug; jct UT 39/UT 226, 5000', WEBER Co, 9 Aug (all JLH); now all UT counties. C. alexandra, Cedar Crk Rd at UT 42, 23 mi W of Snowville, BOX ELDER Co, 1 Jun (RES); Blind Stream Rd 7200', 2.8 mi N of Hanna, DUCHESNE Co, 10 Aug; Second Crk 6400', 10.1 mi SE of Kanosh, MILLARD Co, 26 Jul; S Fk Ogden Rvr Cg 5300', WEBER Co, 12 Jun (all JLH). N. iole, Baker Cn 6600', 6 mi E of Beaver, BEAVER Co, 25 Aug (JLH). L. arota, 93 ova, Power Plant #2, 7350', Beaver River, BEAVER Co, 25 Aug; Gooseberry Spg 7400', 2.2 mi NE of Cedar Mtn summit, EMERY Co, 14 Jul (both JLH). L. rubidus, 0.4 mi W of Tabiona 6600', DUCHESNE Co, 10 Aug; S end of E Cn Rsvr 5700', MORGAN Co, 9 Aug (both JLH). L. heteronea, E side Little Rsvr 7400', 8.4 mi E of Beaver, BEAVER Co, 26 Jul (JLH). L. helloides, Indian Cn 8200', 26 mi SW of Duchesne, DUCHESNE Co, 12 Jun (RES); Ferron 5900', EMERY Co, 28 Jul; State Line 7000', IRON Co, 26 Aug; 1.3 mi W of Nephi 5050', JUAB Co, 2 Aug; Second Crk 6250', 9 mi SE of Kanosh, MILLARD Co, 26 Jul; 1 mi SSW of Salina 5100', SEVIER Co, 2 Aug; jct UT 36/UT 138, 4300', TOOLE Co, 31 Aug; 1.2 mi E of Loa 7050', WAYNE Co, 17 Aug; Eden 4900', WEBER Co, 12 Jun (all JLH). L. nivalis, Laketown Rsvr 6100', 1.8 mi SSE of Laketown, RICH Co, 28 Jun (SWS); S Fk Ogden Rvr Cg 5300', WEBER Co, 12 Jun EARLY (JLH). A. halesus, Baker Cn 6600', 6 mi E of Beaver, BEAVER Co, 25 Aug; Cedar Mtn Rd 6200', 6.3 mi SE of Cleveland, EMERY Co, 2 ova 28 Jul and 1 pupa 29 Aug, adult emg 12 Sep (all JLH). S. titus, ridge NE

of Taylor Flat 8714', 6 mi ENE of Mt Waas, GRAND Co, 1 Jul; 13 mi SW of Woodruff, UT 39, 7600', RICH Co, 9 Aug (both JLH). *S. calanus*, Singletree Cg 8200', 10.5 mi SE of Torrey, WAYNE Co, WEST, 2 Jul (JLH). *S. sylvinus*, UT 208 at Duchesne Rvr 6400', DUCHESNE Co, 10 Aug; 3.5 mi E of Nephi 5500', JUAB Co, 25 Jul; 2 mi E of jct UT 125/UT 132, 4800', MILLARD Co, 25 Jul; 1 mi S of S end of E Cn Rsvr 5800', MORGAN Co, 9 Aug (all JLH); now all UT counties. *C. apama*, 3.2 mi N of Long Vy Jct, US 89, 7200', KANE Co, 5 Jul (JLH). *M. spinetorum*, Blowout Hollow 6900', Iron Mtn, IRON Co, 27 Jul (JLH). *I. fotis*, 5 mi SW of Lucin 5300', BOX ELDER Co, NORTH, 3 May (JLH). *I. augustus iroides*, 2 mi NE of Bountiful Peak, 100 ft E of county line 7600', MORGAN Co, 16 Jun (JLH). *S. melinus*, 1.4 mi E of Nephi 5200', JUAB Co, 25 Jul (JLH). *B. exilis*, Fremont Rvr 6700', 1.5 mi S of Torrey, WAYNE Co, 16 Aug (JLH). *L. marina*, Dry Cn 6600', 4.7 mi NNE of Helper, CARBON Co, 17 May; Gooseberry Spg 7400', 2.2 mi NE of Cedar Mtn summit, EMERY Co, 14 Jul; Long Cn 4400', 7.5 mi WSW of Moab, GRAND Co, 5 May; 1.3 mi W of Nephi 5050', JUAB Co, 2 Aug (all JLH). *E. amyntula*, Dry Cn 6600', 4.7 mi NNE of Helper, CARBON Co, 17 May (JLH). *C. argiolus (=ladon)*, Rilda Cn 7000', 10 mi NW of Huntington, EMERY Co, 18 May (JLH). *E. enoptes*, mouth of Farmington Cn 4800', DAVIS Co, 27 May (JLH). *E. spaldingi*, Baker Cn 6400', 5.5 mi E of Beaver, BEAVER Co, 26 Jul; 1 mi S of jct UT 24/UT 25, 8300', PIUTE Co, 4 Jul (both JLH). *C. lygdamus*, 6.9 mi N of Neola 6800', DUCHESNE Co, 18 May 1985; 12.5 mi W of Woodruff 7600', UT 39, RICH Co, 12 Jun (both JLH); now all UT counties. *P. melissa*, 0.4 mi W of Tabiona 6600', DUCHESNE Co, 10 Aug; Singletree Cg 8200', 10.5 mi SE of Torrey, WAYNE Co, 2 Jul; 0.5 mi W of Pineview Dam 4800', WEBER Co, 31 Jul (all JLH); now all UT counties. *P. saepiolus*, UT 39 at Beaver Crk 7000', WEBER Co, 12 Jun (JLH). *P. glandon*, N Slope Rd 8800', 7.2 mi S of Torrey, WAYNE Co, 19 Jul (JLH). *P. icarioides*, 10.1 mi S of Morgan, MORGAN Co, 11 Jun (RES). *P. acmon*, Baker Cn 6600', 6 mi E of Beaver, BEAVER Co, 25 Aug (JLH). *A. normo*, Second Crk 6250', 9 mi SE of Kanosh, MILLARD Co, 26 Jul (JLH); several pupae in *E. inflatum*, 2 mi E of Leeds, Washington Co, 20 Sep (JMJ). *E. claudia*, Castle Creek 7100', 4.2 mi NNW of Mt Waas, GRAND Co, 1 Jul (JLH). *S. nokomis*, Fish Crk 6900', 3.9 mi SSE of Torrey, WAYNE Co, 16 Aug, first new record in several years (JLH). *S. cybele*, Second Crk 6400', 10.1 mi SE of Kanosh, MILLARD Co, 26 Jul; UT 65, 1.1 mi W of E Cn Rd 6000', MORGAN Co, 9 Aug; 0.5 mi W of Pineview Dam 4800', WEBER Co, 31 Jul (all JLH). *S. coronis*, mouth of Farmington Cn 4800', DAVIS Co, 5 Jun (SWS); UT 65, 1.1 mi W of E Cn Rd 6000', MORGAN Co, 11 Aug (JLH). *S. zereus*, 0.5 mi W of Pineview Dam 4800', WEBER Co, 31 Jul (JLH). *S. callippe*, 10.1 mi S of Morgan, MORGAN Co, 11 Jun (RES). *S. egleis*, Bountiful Peak 9200', DAVIS Co, 14 Jul (SWS). *S. atlantis*, Price Rvr 6200', 4.5 mi NW of Helper, CARBON Co, 18 Aug (JLH); Bountiful Peak 9200', DAVIS Co, 13 Jul (SWS); UT 65, 1.1 mi W of East Cn Rd 6000', MORGAN Co, 11 Aug (JLH); N Slope Rd at Spring Crk 8600', 7.3 mi S of Torrey, WAYNE Co, 3 Aug (JLH). *S. mormonia*, N Slope Rd at Spring Crk 8600', 7.3 mi S of Torrey, WAYNE Co, 16 Aug (JLH). *B. kriemhild*, S Fk Ogden Rvr Cg 5300', WEBER Co, 12 Jun, ?EARLY (JLH). *E. anicia*, Coal Crk Rd 5700', 5.1 mi NNE of Wellington, CARBON Co, 18 May (JLH); hilltop 9052', 1 mi E of US 191, 29 mi SW of Duchesne, DUCHESNE Co, 12 Jun (RES); hilltop 12.1 mi S of Morgan, UT 66, MORGAN Co, 11 Jun (RES). *E. edita*, 6.6 mi N of Neola 6800', DUCHESNE Co, 31 May (RES); S end of Causey Rsvr 5700', WEBER Co, 12 Jun (JLH). *C. palla*, S Fk Ogden Rvr Cg 5300', WEBER Co, 12 Jun (JLH). *P. selenis (tharos type "B", erroneously referred to pascoensis)*, 6.9 mi N of Neola 6800', DUCHESNE Co, 16 Jun 1985 (JLH); Bug Lake 7800', head of Laketown Cn, RICH Co, 5 Jul (SWS). *P. pratensis (=campestris)*, ssp *pratensis*, Clear Crk Cn, 5.5 mi S of jct Yost Rd, Raft River Mts, Box Elder Co, 1 Jun (RES - this may be the only population of the typical ssp in Utah); ssp *camillus*, 1.7 mi SE of Mtn Green 5000', NE side of I-80N, MORGAN Co, 24 May (JLH); Fremont Rvr 6700', 0.8 mi SW of Torrey, WAYNE Co, 19 May 1984 (JLH); now all UT counties. *P. mylitta*, Price 5600', CARBON Co, 4 Jul 1985; Poison Spg Cn 4300', 20 mi SE of Hanksville, GARFIELD Co, SE, 27 Apr 1985; Baker Cn 6600', 6 mi E of Beaver, BEAVER Co, 25 Aug; S Fk Ogden Rvr Cg 5300', WEBER Co, 12 Jun (all JLH). *P. satyrus*, Baker Cn 6600', 6 mi E of Beaver, BEAVER Co, 26 Jul (JLH); Mueller Park 5600', DAVIS Co, 1 May (JLH); 1.8 mi W of Mtn Green 4800', MORGAN Co, 15 Apr (JLH); Hoyt Cn 7400', 3.3 mi NE of Kamas, SUMMIT Co, emg 12-18 Aug (SWS); mouth of Ogden Cn 4400', NE of Ogden, WEBER Co, 15 Apr (JLH). *P. faunus*, Huntington Cn 6800', 10 mi NW of Huntington, EMERY Co, 27 Jul 1985 (JLH). *P. zephyrus*, Duchesne Rvr Rd 7400', 0.6 mi S of Defa Rch, DUCHESNE Co, 10 Aug (JLH); Rilda Cn 7600', 11 mi NW of Huntington, EMERY Co (new data to replace the erroneous record listed last year), 18 May (JLH); Laketown Rsvr 6100', 1.8 mi SSE of Laketown, RICH Co, 30 Aug (SWS). *N. californica*, 2.7 mi SSE of Bountiful Peak 8200', DAVIS and MORGAN counties, 15 Jun; Laketown Rsvr 6100', 1.8 mi SSE of Laketown, RICH Co, 4 Jul (both SWS). *N. antiopa*, Clear Crk Cn, 6.7 mi S of jct Yost Rd, Raft River Mts, BOX ELDER Co, 1 Jun (RES); mouth of Farmington Cn 4800', DAVIS Co, 29 Mar (JLH); NE side of I-80N, 5000', 1.7 mi SE of Mtn Green, MORGAN Co, 15 Apr (JLH); W side of Mt Pleasant 5800', SANPETE Co, 18 May (JLH); mouth of Taylor Cn 5000', E side of Ogden, WEBER Co, 15 Apr (JLH); now all UT counties. *N. milberti*, numerous larvae, Dry Cn 6600', 4.7 mi NNE of Helper, CARBON Co, 17 May; Rilda Cn 7600', 11 mi NW of Huntington, EMERY Co, 18 May; NE side of I-80N, 5000', 1.7 mi SE of Mtn Green, MORGAN Co, 15 Apr; E side of Thousand Lake Mtn 10500', 0.2 mi NE of Deep Crk Lk, WAYNE Co, 17 Aug (all JLH). *V. atalanta*, Baker Cn 6600', 6 mi E of Beaver, BEAVER Co, 26 Jul; Dry Cn 6600', 4.7 mi NNE of Helper, CARBON Co, 17 May; Huntington Cn 6800', 10 mi NW of Huntington, EMERY Co, 18 May; E side of Thousand Lake Mtn 10500', 0.2 mi NE of Deep Crk Lk, WAYNE Co, 17 Aug (all JLH). *V. cardui*, Mueller Park 5500', DAVIS Co, 1 May; UT 65, 1.1 mi W of E Cn Rsvr 6000', MORGAN Co, 9 Aug; UT 39 in NW Ogden, WEBER Co, 31 Jul (all JLH); now all UT counties. *V. carve annabella*, Skyline Dr 8200', 2.7 mi SSE of Bountiful Peak, DAVIS and MORGAN counties, 13 Jul (SWS); UT 208 at Duchesne Rvr 6400', DUCHESNE Co, 10 Aug (JLH); Panguitch 6600', GARFIELD Co, 6 Jul (JLH); Bug Lk 7800', head of Laketown Cn, RICH Co, 5 Jul (SWS). *J. coenia*, State Line 7000', IRON Co, 26 Aug (JLH). *J. nigrosuffusa*, 1 mi E of St George, WASHINGTON Co, STATE, NORTH, 20 Sep (JMJ). *B. archippus*, UT 24 at Fremont Rvr 6900', 5 mi W of Torrey, WAYNE Co, 2 Aug (JLH). *B. weidemeyerii*, Baker Cn 6400', 5.5 mi E of Beaver, BEAVER Co, 26 Jul; 0.2 mi W of Indianola 5900', SANPETE Co, 3 Aug 1984; UT 39 in NW Ogden 4400', WEBER Co, 5 Aug 1984 (all JLH); now all UT counties. *A. bredowii*, Baker Cn 6600', 6 mi E of Beaver, BEAVER Co, 26 Jul; Dry Cn 6600', 4.7 mi NNE of Helper, CARBON Co, 18 Aug (both JLH). *C. tullia ampelos*, Clear Crk Cn, 5.5 mi S of jct Yost Rd, Raft Rvr Mts, BOX ELDER Co, 1 Jun (RES). *C. tullia ochracea (brenda)*, UT 66, 10.1 mi S of Morgan, MORGAN Co, 11 Jun (RES). *C. sthenela*, mouth of Farmington Cn 4800', DAVIS Co, 26 Jun ?Early (SWS); Polk Crk 8100', E side of Thousand Lake Mtn, WAYNE Co, 17 Aug (JLH). *C. oetus*, UT 208 at Duchesne Rvr 6400', DUCHESNE Co, 10 Aug; Singletree Cg 8200', 10.5 mi SE of Torrey, WAYNE Co, 2 Jul (both JLH). *N. ridingsii*, along main rd 8540', 4.2 mi N of Mt Waas, GRAND Co, 13 Jul (JLH). *D. plexippus*, 0.6 mi N of Wellington 5500', CARBON Co, 22 Jun (JLH); UT 106, 2 mi S of Farmington 4300', DAVIS Co, 31 Jul (JLH); UT 66, 10.1 mi S of Morgan, MORGAN Co, 11 Jun (RES); San Pitch Rvr 5100', 1.2 mi W of Gunnison, SANPETE Co, 2 Aug (JLH); 3.2 mi SW of Salina 5150', SEVIER Co, 28 Jul (JLH); Provo, Utah Co, 29 Mar EARLY (JMJ); UT 39 in NW Ogden 4400', WEBER Co, 31 Jul (JLH); now all UT counties. *D. gilippus*, Hanksville 4300', WAYNE Co, 20 Jul (JLH).

MOTHS: *Hemileuca pneumogeni* and *Arachnis picta*, at blacklight, Red Cliffs Cg, west of Leeds, Washington Co, 20 Sep (JMJ).

COLORADO. Contributors: FMB, BFC, TSD, SLE, CDF, GBG, LCK, ROK, RLK, MLM, PAO, JAS, RES, SS. The season was advanced and dry, with many EARLY records, plus numerous southern migrants were observed. At high elevations the season was more normal (MLM).

BUTTERFLIES: I received 144 data points representing 106 species and 75 county records. There was one STATE record (*Dryas julia*), and a fifth species (*Pieris rapae*) was completed from all CO counties. The other four are *P.*

protodice, C. eurytheme, C. philodice and V. cardui. E. clarus, larvae on Glycyrrhiza lepidota, Cotopaxi, Fremont Co, 10 Aug 1961, female adult emg 3 Apr 1962 (ROK). T. mexicana, Piedra Rd at Piedra Rvr 7800', 16.3 mi NW of Pagosa Spgs, HINSDALE Co, 3 Jul; Transfer Cg 9000', 10 mi N of Mancos, MONTEZUMA Co, 30 Jun (both RES). E. icelus, Beaver Crk Rd 8000', GRAND Co, 4 Jun (TSD); Cement Crk 9500', 1 mi N of Silverton, SAN JUAN Co, 2 Jul (RES). E. horatius, Garden of the Gods Park, El Paso Co, 16 Jul (MLM). E. martialis, Mt Zion 7100', Jefferson Co, 29 Apr (RES). E. pacuvius, Mt Zion 7100', Jefferson Co, 29 Apr EARLY (RES). E. afranius, wiesti site, WELD Co (BFC). P. ruralis, common in Larimer Co canyons, May - early Jun (BFC). P. communis, Radium St Wildlife Area (SWA) 7040', GRAND Co, 14 Jun (TSD); Hwy Spg Cg 8300', US 160, RIO GRANDE Co, 6 Jul (RES). P. catullus, Radium SWA 7040', GRAND Co, 30 May (TSD). H. alpheus, Mesa Co, 20 Apr EARLY (RLK). P. pirus, Ft Collins, Larimer Co, 28 Aug LATE (PAO). O. edwardsii, Garden of the Gods Park, El Paso Co, 16 Jul (MLM). H. juba, Delta Co, 22 Apr EARLY (RLK). H. ottoe, Piney Crk Hills 6000', ARAPAHOE Co, 19 Jun (GBG, det RES). H. leonardus montana, nr Cheesman Rsvr, Jefferson Co, 17 Sep LATE (LCK); best flight in many years for official Denver Water Board study (RES). A. campestris, Hwy I-70 at Elbert/Arpahoe Co line, ELBERT Co, 20 Sep (RES); now known from all CO prairie counties. P. peckius, Ft Collins, Larimer Co, 8 Oct LATE (PAO). P. draco, La Plata Co, 1 Sep 1985 LATE (RLK). P. mystic, jct US 6/CO 119, 7100', Clear Creek Cn, CLEAR CREEK Co (confirmatory of unlikely type locality), 18 Jun; US 666, 6200', 2.3 mi N of Cortez, MONTEZUMA Co, WEST, 30 Jun (both RES). P. sonora, 1 mi S of Granby airport, Grand Co, 12 Jul (MLM). A. arogos, Lory St Park 5800', Larimer Co, 21 Jun EARLY (RES). O. snowi, best flight in many years, canyons of Jefferson and Gilpin Counties, mid July (MLM, RES). P. taxiles, No Name Crk 6400', Glerwood Cn, Garfield Co, 13 Jun EARLY for W Slope (RES); oviposition on Agropyron repens, McMurray Ponds, Larimer Co, 14 Jul 1985 (SLE). E. bimacula, Mail Crk 4980', Ft Collins, Larimer Co, 21 Jun EARLY (PAO, RES). A. simius, 7 mi E of jct US 24/CO 94, El Paso Co, 16 Jul LATE (? second generation) (L Gibson/MLM). M. streckeri, 8 mi SW of Wiggins, WELD Co, 29 May (PAO). B. philenor, Garden of the Gods Park, El Paso Co, 16 Jul (MLM). P. zeliccaon, Delta Co, 30 Mar EARLY (RLK). P. indra minori, Delta Co, 22 Mar VERY EARLY (RLK). P. rutulus, Mesa Co, 20 Apr EARLY (RLK); Hwy Spg Cg 8300', US 160, RIO GRANDE Co, 6 Jul (RES); Ophir 9600', 17.1 mi NE of Rico, SAN MIGUEL Co, 4 Jul (RES). P. eurymedon, Dolores Overlook 8000', 11.2 mi E of Dove Creek (town), DOLORES Co, 30 Jun; Transfer Cg 9000', 10 mi N of Mancos, MONTEZUMA Co, SW, 30 Jun (both RES). P. multicaudatus, Alamosa, ALAMOSA Co, 29 Jun (RES); Ordway 4350', CROWLEY Co, 14 Jul (RES); Radium SWA 7040', GRAND Co, 31 May (TSD); Park Crk Cg 8400', US 160, MINERAL Co, 6 Jul (RES). N. menapia, Rattlesnake Jack's, Larimer Co, 3 Jul EARLY (BFC). A. drusilla, Poudre Trail nr LeMay, Ft Collins, LARIMER Co, NORTH, 19 Jun EARLY (PAO). P. occidentalis, Montrose Co, 23 Feb EARLY (RLK). P. rapae, ALAMOSA, COSTILLA, HINSDALE, HUERFANO, RIO GRANDE, SUMMIT Counties, 29 Jun - 26 Jul (RES); now all CO counties. A. sara thooza, Delta Co, 22 Mar EARLY (RLK). A. sara julia, Blue Rvr Cg 8400', Summit Co, 30 May (RES). E. hyantis, Montrose Co, 23 Feb EARLY (RLK). E. olympia, common, Mt Zion 7100', Jefferson Co, 29 Apr (RES). C. philodice, Hwy 160, 7700', 11.8 mi NE of Pagosa Spgs, MINERAL Co, 3 Jul (RES); now all counties in Zone 4 (see Utah). C. scudderii, W side of Rollins Pass, Boulder Co, 15 Jul (MLM). Z. cesonia, US 287 at KIOWA/CHEYENNE Co line 4150', 15 Jul (RES). P. sennae, Cameron Pass, JACKSON Co, 14 Jul (PAO). P. agarithe, Ft Collins, LARIMER Co, NORTH, 28 Jul (PAO). E. nicippe, Queen Lake SWA 3900', KIOWA Co, 15 Jul; Flagler SWA 4700', 4.0 mi E of Flagler, KIT CARSON Co, 14 Jul; W end of Bonny Rsvr 3700', YUMA Co, 16 Jul (all RES). E. mexicana, 1.5 mi S of Las Animas 3900', BENT Co, 15 Jul; Ordway 4350', CROWLEY Co, 14 Jul; Kiowa Creek 4200', 0.4 mi W of Eads, KIOWA Co, 15 Jul (all RES). E. nise, female, W end of Bonny Rsvr 3700', YUMA Co, NORTH and 2nd STATE, 16 Jul (RES). N. iole, abundant, Boulder Rsvr, Boulder Co, mid Sep - late Oct (BFC). L. arota, Radium SWA 7040', GRAND Co, 19 Jul (TSD). L. cuprea, Rollins Pass, Boulder Co, 15 Jul (MLM); American Lks 11500', JACKSON Co, 19 Jul (PAO). L. xanthoides, Wild Horse Creek at Kit Carson 4300', CHEYENNE Co, 15 Jul (RES); Ft Collins, Larimer Co, 6 Aug LATE (PAO); CO 71 at N Rush Crk 5400', 14.3 mi S of Limon, LINCOLN Co, 14 Jul (RES). L. nivalis, Ferndale PG, W of Rabbit Ears Pass, Routt Co, 12 Jul (MLM). H. crysalus, poor flight this year, Surry Ridge, Douglas Co, 16 Jul (MLM). S. saepium, Horsetooth Mtn Park, Larimer Co, 21 Jun EARLY (PAO). S. liparops, Lory St Park 6100', Larimer Co, 21 Jun EARLY (RES). S. acadica, Limon 5365', LINCOLN Co, 14 Jul (RES). S. californica, Terry Rch, 9 mi NW of Carr, WELD Co, 4 Jul (PAO). C. sheridani, Red Rocks Park, Jefferson Co, 1 March EARLY (JAS, RES). C. paradoxa, Mesa Co, 20 Apr EARLY (RLK). C. affinis, 6 mi NW of Hebron, JACKSON Co, 28 Jun LATE (PAO). C. apama, fresh, Garden of the Gods Park, El Paso Co, 16 Jul LATE (MLM). M. siva, Delta Co, 22 Mar VERY EARLY (RLK); Radium SWA 7040', GRAND Co, 19 Jul (TSD). I. polios, Flagstaff Mtn, Boulder Co, 30 Apr (RES). I. mossii schryveri, Red Rocks Park, Jefferson Co, 1 Mar EARLY (JAS, RES). S. melinus, Grand Lk 8400', GRAND Co, 10 Jul 1974 (TSD). L. marina, Spring Crk Dam, Larimer Co, 13 May EARLY (PAO); wiesti site, WELD Co, '79 through '81 (BFC). H. isola, Messer SWA 4100', 8.7 mi NE of Hillrose, WASHINGTON Co, 16 Jul (RES); now known from all CO prairie counties. E. amyntula, wiesti site, WELD Co, '79 through '81 (BFC). C. argiolus (ladon), fresh female, Cheesman Rsvr 6800', Jefferson Co, 16 Aug LATE (PAO). C. neglectamajor, Horsetooth Mtn Park, Larimer Co, 2 Jun EARLY (PAO). E. battoides, 7 mi E of jct US 24/CO 94, El Paso Co, 16 Jul (MLM). E. enoptes, Delta Co, 22 Apr EARLY (RLK); Dolores Overlook 8000', 11.2 mi E of Dove Creek, Dolores Co, 30 Jun (RES). P. melissa fm. pseudosamuelis (probably a good ssp), Silverton 9300', SAN JUAN Co, 2 Jul (RES). P. shasta pitkinensis, Rollins Pass, Boulder Co, 15 Jul (MLM). A. nais, Coal Creek Cn, 1.4 mi above railroad trestle, Jefferson Co, 11 Jul (MLM). L. bachmani, wiesti site, WELD Co, '79 through '81 (BFC); W end of Bonny Rsvr 3700', Yuma Co, 16 Jul (RES). D. julia (julia), Rock Crk Cn, EL PASO Co, STATE, ZONE 4, NORTH, 19 Jul (H Zirlin/FMB). A. vanillae, Garden of the Gods Park, El Paso Co, 16 Jul (MLM); La Porte, LARIMER Co, 18 May EARLY (PAO). E. claudia, Wild Horse Crk at Kit Carson 4300', CHEYENNE Co, 15 Jul (RES); now known from all CO prairie counties. S. idalia, Flagler SWA 4700', 4.0 mi E of Flagler, KIT CARSON Co, 14 Jul (RES). S. aphrodite, Horsetooth Mtn Park, Larimer Co, 18 May EARLY (PAO). S. edwardsii, 3 mi SW of Mtn Home, JACKSON Co, 28 Jun (PAO). S. callippe meadii, Mt Zion 7100', Jefferson Co, 29 Apr EARLY (RES). C. acastus, Radium SWA 7040', GRAND Co, 30 May (TSD). C. damoetas, Rollins Pass, Boulder Co, 15 Jul (MLM). C. gorgone, Limon 5365', LINCOLN Co, 14 Jul (RES); now known from all CO prairie counties. C. myceteis, Radium SWA 7040', GRAND Co, 23 Jun (TSD). P. vesta, Wild Horse Crk at Kit Carson 4300', CHEYENNE Co, 15 Jul (RES). P. picta, I-70 at ELBERT/Arpahoe Co line 5400', 20 Sep (RES). P. pallida barnesi, Radium SWA 7040', GRAND Co, 30 May (TSD, det RES). P. interrogationis, Kit Carson 4300', CHEYENNE Co, 15 Jul (RES). P. oreas, Coal Crk Cn, Jefferson Co, 12 Jul (PAO); new for "Gilpin Co" butterfly count. N. californica, Red Rocks Park, Jefferson Co, 1 Mar EARLY (RES). N. antiopa, mature larva found at White Rocks near Niwot 5100', Boulder Co, 4 Oct 1967 (JAS); this is first larval evidence of a second generation in CO. V. virginianensis, US 160, 11.8 mi NE of Pagosa Spgs 7700', MINERAL Co, 3 Jul (RES); wiesti site, WELD Co, '79 - '81 (BFC). V. carye annabella, Parshall 7600', GRAND Co, 5 Jul 1973 (TSD); Lk Mancos Rch 7800', 5 mi N of Mancos, Montezuma Co, 30 Jun (RES). M. petreus, Garden of the Gods Park, EL PASO Co, 2nd STATE, NORTH, 16 Jul (J Hyatt/MLM). S. eurydice fumosa, La Porte, Larimer Co, 21 Jun EARLY (RES). C. oetus, Terry Rch, 9 mi NW of Carr, WELD Co, 4 Jul (PAO). E. epipsodea, US 160, 11.7 mi NE of Pagosa Spgs 7700', ARCHULETA Co, 3 Jul; CO 145, 15.7 mi E of Stoner 8400', MONTEZUMA Co, SW, 4 Jul (both RES). E. theano, Rollins Pass, Boulder Co, 15 Jul (MLM). E. magdalena, Rollins Pass, Boulder Co, 15 Jul (MLM); American Lakes 11500', nr Thunder Pass, JACKSON Co, 19 Jul (PAO). O. uhleri, Mt Zion 7100', Jefferson Co, 29 Apr EARLY for female (RES). O. melissa, American Lks 11500', nr Thunder Pass, JACKSON Co, 19 Jul (PAO). O. polixenes, Berthoud Pass, Clear Crk Co, 11 Jul (MLM). D. gilippus, Flagler SWA 4700', 4.0 mi E of Flagler, KIT CARSON Co, 18 Jul (MLM).

NOTES: We are not yet to the point where we can state how many state and county moth records there are in the

Summary, but it is likely that many of the records which follow are new. I begin by completing the TSD list from 1985 that had to be interrupted in the middle last year; Ro = Routt Co, Mg = Morgan Co, Gr = Grand Co, Bo = Boulder Co. Nephelodes carminata, Gr, Jul. Hydroeciodes juvenalis, Gr, Ro, Aug. H. serrata, Gr, Jul. Feltia jaculifera, Gr, Aug. F. herilis, Mg, Aug. Loxagrotis grotei, Bo, Gr, Aug. Richia parentalis, Bo, Gr, Aug. Pseudorthosia variabilis, Ro, Aug. Euagrotis bairdii, Gr, Jul. Crassivesica bocha, Gr, Aug. Peridroma saucia, Mg, Aug. Graphiphora haruspica inopinata, Gr, Aug. Eurois occulta, Gr, Jul. E. astricta, Gr, Jul-Aug. E. nigra, Gr, Ro, Jul-Aug. Xestia smithii, Gr, Ro, Aug. X. oblata streckeri, Gr, Ro, Jul. X. collaris, Gr, Aug. Abagrotis vittifrons, Gr, Aug. A. trigona, Bo, Aug. A. mirabilis, Bo, Aug. A. crumbi, Gr, Jul. Rhynchagrotis exertistigma, Gr, Jun. Pyrrhia exprimens, Ro, Jul. Heliothis zea, Bo, Aug. H. phloxiphagus, Gr, Jul. H. paradoxus, Mg, Aug. Schinia villosa, Gr, Jul. S. arcigera, Mg, Aug. S. mortua, Mg, Aug. S. jaguarina, Mg, Aug. S. sexplagiata, Mg, Aug. S. regia, Mg, Aug. S. albafascia, Mg, Aug. S. separata, Gr, Aug. S. cumatilis, Mg, Aug. S. reniformis, Mg, Aug. S. citrinella, Mg, Aug. TSD submitted the following records from 1986: Antheraea polyphemus, Ro, 11 Jun. Hyalophora gloveri, Gr, 31 May. Ceratonia amyntor, Mg, Jun. C. undulosa, Mg, Jun. Sphinx vashti, Gr, May-Jun. S. asella, Gr, Jun. S. gordius, Gr, May-Jun. S. dollii, Gr, Jun. Paonias excaecatus, Je (Jefferson Co), Jul. P. myops, Ro, Jun. Hemaris senta, Gr, Jun. Proserpinus juanita, Weld Co, Jun. Ctenucha cressonana, Je, Jul. Scoliopteryx libatrix, Gr, May. Melipotis jucunda, Gr, May-Jun. Diachrysa aeriodes, Ro, Aug. Autographa bimaculata, Ro, Aug. Paectes flabella, Gr, Jul. Lithacodia bellicula, Mg, Jun. Tarachidia semiflava, Gr, May-Jun. T. erastrioides, Mg, May. Theresea flavicosta, Mg, May-Jun. Panthea gigantea, Gr, Jun. Acrionicta americana, Je, Jul. A. dactylina, Gr, Jun. A. strigulata, Gr, Jun. A. barnesii, Gr, May-Jun. Simyra henrici, Mg, Jun. Bellura obliqua, Mg, Jun. Dypterygia rozmani, Mg, Jun. Amphipyra glabella, Mg, Aug. Lacanobia subjuncta, Je, Jul. Abagrotis trigona, Je, Jul. A. glenni, Je, Jul. A. nanalis, Gr, Aug. Heliothis subflexus, Mg, Jun. H. phloxiphagus, Mg, Aug. Schinia trifascia, Gr, Jul. S. meadi, Mg, Jun. BFC found Euproserpinus wiesti fairly common in Weld Co in May, and recorded Proserpinus juanita there on 23 Jun. SS found Coloradia luski at light, 15 mi W of Aguilar, 7500', LAS ANIMAS Co, STATE, 13 Jul and 17 Aug 1982, and at Kittredge, 6900', JEFFERSON Co, 2 Jul 1983. Catocala grotiana and Hemihyalaea labecula were taken at Bear Crk, San Isabel NF nr Salida, Fremont Co, 5 Aug (CDF). The microlep which exploded all over CO at all elevations in 1985, generating articles in many local newspapers, and which was virtually absent in 1986, was Loxostege sticticalis (RES, det J A Powell).

NEW MEXICO. Contributors: SJC, HKC, CDF, RWH, SAJ, ROK, PAO, RES, MET, JPT. The season was basically very dry and advanced, but the Guadalupe Mts received an enormous amount of rain in June (SJC). Almost 210 total data points were received for the Summary.

BUTTERFLIES: 178 data points were received, representing 121 species and 143 county records. There were 5 state records (Lerema accius, Mitoura millerorum, Zizula cyna, Chlosyne janais, Anartia jatrophae). No additional species were completed from all counties, and the total stands at 13 species. The state went over 100 avg species per county in 1986, and the current average is 100.88 sp/co. This average is second only to Arizona. It was an unusually good year for southern immigrant species (see state and county records). E. clausus, Kirtland, SAN JUAN Co, NW, 9 Jul (SJC). P. leo, NM 90, 5 mi E of Emory Pass, SIERRA Co, 31 Jul (RES). C. arizonensis, Guadalupe Cn 4700', Peloncillo Mts, Hidalgo Co, 4 Aug (SJC, RES); Mahoney Wash, Florida Mts, LUNA Co, 30 Jul (SJC). T. pylades, Bullis Cn, Guadalupe Mts, CHAVES Co, 4 May (SJC, RWH). C. hippalus, Mahoney Wash, Florida Mts, LUNA Co, 30 Jul (SJC). C. caicus, Cottonwood Cn 5500', Peloncillo Mts, Hidalgo Co, 4 Aug (SJC, JAS, RES); Sawpit Crk, 2 mi N of Kingston, SIERRA Co, 31 Jul (SJC). S. zampa, Guadalupe Cn 4700', Peloncillo Mts, Hidalgo Co, 4 Aug (RES); Rock Hound St Park, Little Florida Mts, Luna Co, 27 Mar (SJC, RES). E. telemachus, Bullis Cn, Guadalupe Mts, CHAVES Co, 4 May (RWH/SJC). E. meridianus, Guadalupe Rim, CHAVES Co, 28 Jul (SJC); summit 5634', Little Florida Mts, Luna Co, 27 March (SJC, RES). E. horatius, Thayer Hill 5547', 7.5 mi E of Queen, EDDY Co, SE, 24 Mar (RWH, det RES). E. tristis tatus, Guadalupe Rim, CHAVES Co, 28 Jul (SJC); Sitting Bull Falls 4660', EDDY Co, SE, 23 Mar (RES). E. funeralis, Santa Rosa Dam, GUADALUPE Co, 4 Jul (SJC). E. afranius, Sitting Bull Falls 4660', EDDY Co, SE, 23 Mar (RWH, det RES). P. centaureae, Cerro Vista, MORA Co, 28 Jun (SJC). P. scriptura, Lewis Cn, Guadalupe Mts, CHAVES Co, 29 Aug (RWH/SJC). H. ericetorum, Mine Cn at Rio Chama 6500', N Jemez Mts, RIO ARRIBA Co, EAST, 1 Jul 1985 (RWH). C. nessus, Bullis Cn, Guadalupe Mts, CHAVES Co, 4 May (SJC, RWH); Rock Hound St Park 4600', Little Florida Mts, Luna Co, 27 Mar (RES). H. alpheus, Sumner Dam, DE BACA Co, 12 Apr (SJC). S. ceos, Rock Hound St Park 4600', Little Florida Mts, Luna Co, 27 Mar (RES); Percha Dam St Park, SIERRA Co, 18 Apr (SJC). P. polingii, Emory Pass 8228', Grant/Sierra Co line, 5 Aug (RES). L. accius, Rattlesnake Spgs, EDDY Co, STATE, 13 Sep (SJC). A. arene, Lewis Cn, Guadalupe Mts, CHAVES Co, 29 Aug; Santa Rosa Dam, GUADALUPE Co, NORTH, 4 Jul; SOCORRO Co (all SJC). O. edwardsii, Sec 31, Guaje Cn 6500', E slope Jemez Mts, SANTA FE Co, 2 Aug 1984 (RWH). C. aurantiaca, JFK Cg, W slope Manzano Mts, VALENCIA Co, 25 Jul 1985 (MET). S. morrisoni, Pickett Hill 6441', FR 523, 1 mi NW of NM 137, EDDY Co, SE, 24 Mar (SJC, RES); Cerro Vista, MORA Co, 28 Jun (SJC). H. woodgatei, 2 mi E of Magdalena, Magdalena Mts 7000', SOCORRO Co, SE, 14 Sep 1985 (RWH). H. pahaska, Guadalupe Rim, CHAVES Co, 28 Jul (SJC); Guadalupe Cn 4700', Peloncillo Mts, Hidalgo Co, 4 Aug (SJC, JAS, RES); hill 3 mi ENE of Hillsboro 5300', NM 90, SIERRA Co, 28 Mar and 31 Jul (SJC, RES). A. logan lagus, Sumner Dam, DE BACA Co, 6 Jun (SJC). P. taxiles, NM 120, 3 mi E of Ocate, MORA Co, 29 Jun (SJC). E. vestris kiowah, Sitting Bull Falls 4660', EDDY Co, SE, 10 Aug (RWH/SJC). A. lunus, Guadalupe Cn 4700', Peloncillo Mts, Hidalgo Co, 4 Aug (SJC). A. vierecki, Bullis Cn, Guadalupe Mts, CHAVES Co, 3 May (SJC, RWH). A. python, Bullis Cn, Guadalupe Mts, CHAVES Co, 4 May (SJC, RWH). A. simius, Cloverdale, HIDALGO Co, SW, 1 Aug (K Roever/SJC); NM 120, 2 mi W of Canadian Rvr, MORA Co, 29 Jun (SJC); Guadalupe Rim, OTERO Co, 27 Jul (SJC). A. exotera, Guadalupe Cn 4700', Peloncillo Mts, Hidalgo Co, 4 Aug (SJC, RES). A. oslari, Bullis Cn, Guadalupe Mts, CHAVES Co, 4 May; Rio Grande Gorge, TAOS Co, 10 May (both SJC). A. texanae, Bullis Cn, Guadalupe Mts, CHAVES Co, 4 May; Guadalupe Cn 4700', Peloncillo Mts, Hidalgo Co, 4 Aug; Sawpit Crk, 2 mi N of Kingston, SIERRA Co, 31 Jul (all SJC). A. aenus ssp, Guadalupe Cn 4700', Peloncillo Mts, Hidalgo Co, 4 Aug (SJC). A. eog, Skeleton Cn, Peloncillo Mts, HIDALGO Co, SW, 1 Aug (SJC). A. nysa, Guadalupe Cn 4700', Peloncillo Mts, HIDALGO Co, SW, 4 Aug (SJC, JAS, RES). M. coloradensis, CHAVES Co (SJC); above Sitting Bull Falls, EDDY Co, SE, 23 Mar (SJC); 3.5 mi W of Canadian Rvr 5400', NM 120, MORA Co, 29 Mar (RES). B. philenor, Lewis Cn, Guadalupe Mts, CHAVES Co, 28 Jul (SJC); DE BACA Co (SJC). P. polyxenes asterius, Belen, VALENCIA Co, 30 Jul 1985 (MET). P. zelicaon, Cerro Vista, MORA/TAOS Counties, 28 Jun (SJC). P. multicaudatus, Sumner Dam, DE BACA Co, 12 Apr (SJC); MORA Co (SJC). P. cresphontes, Lewis Cn, Guadalupe Mts, CHAVES Co, 28 Jul (SJC). P. ornythion, Bullis Cn, Guadalupe Mts, CHAVES Co, 28 Jul; Rattlesnake Spgs, EDDY Co, 26 Jul (both SJC). P. sisymbrii, NM 137 at Trail 68, 5725', EDDY Co, SE, 23 Mar (SJC, RES); NM 120, 1.4 mi E of Canadian Rvr 5400', HARDING Co, NE, 29 Mar (RES). A. sara, Spring Cn 5200', Florida Mts, Luna Co, 27 Mar (SJC, RES); 5.4 mi E of Emory Pass, 7000', SIERRA Co, 28 Mar (SJC, RES). A. pima, only a few worn females left, Rock Hound St Park 4600', Little Florida Mts, Luna Co, 27 Mar (RES). E. ausonides, Cerro Vista, MORA Co, 28 Jun (SJC). C. alexandra, Cabresto Cn 8000', Taos Co, 27 Jul (CDF). Z. cesonia, NM 120 at Canadian Rvr, MORA Co, 29 Jun (SJC). P. sennae, Tunnel Spgs, Sandia Mts, SANDOVAL Co, 28 Jul (CDF). K. lyside, Taos, TAOS Co, NW, 30 Jul (PAO). E. nicippe, NM 120 at Canadian Rvr 5400', HARDING Co, 6 Aug (RES). E. mexicana, Bullis Cn, Guadalupe Mts, CHAVES Co, 28 Jul (RWH/SJC). E. boisduvaliana, Rattlesnake Spgs, EDDY Co, SE, 16 May (RWH/SJC); Guadalupe Cn 4700', Peloncillo Mts, Hidalgo Co, 4 Aug (SJC). L. arota, 3 mi E of Mogollon 7600', Catron Co, 5 Jul 1985 (SAJ). H. crysalus, Emory Pass, SIERRA Co, 5 Aug (SJC, RES). A.

halesus, Bullis Cn, Guadalupe Mts, CHAVES Co, 28 Jul (RWH/SJC); Santa Rosa Dam, GUADALUPE Co, 12 Apr (SJC); summit Little Florida Mts, 5634', Luna Co, 27 Mar (SJC, RES); Trigo Cn, Manzano Mts, TORRANCE Co, 25 Jul 1985 (MET). P. alcestis, Sumner Dam, DE BACA Co, 6 Jun (SJC). S. calanus, Los Alamos Rsvr 8000', LOS ALAMOS Co, 26 Aug 1985 (RWH). M. leda, Trigo Cn, Manzano Mts, TORRANCE Co, NE, 25 Jul 1985 (MET). M. gryneus, Bullis Cn, Guadalupe Mts, CHAVES Co, 17 Jun (RWH, R K Robbins/SJC); Rio Peñasco, Sacramento Mts, OTERO Co, SW, 22 Jun (R K Robbins/SJC). M. spinetorum, Dark Cn Lookout, EDDY Co, SE, 3 May (SJC, RWH). M. millerorum, 3 mi N of Weed 6700', OTERO Co, NORTH, 12 Jun 1977 (H K Clench and M Clench, cited by K Johnson, J Lepid Soc 39(2):119-124, 1985 [1986], STATE, ZONE 4, USA; this is a controversial record; having reviewed the paper I consider it to be M. spinetorum). S. mcfarlandi, Bullis Cn, Guadalupe Mts, CHAVES Co, 17 Jun (R K Robbins/SJC). I. henrici, Last Chance Cn, 4450', 3.5 mi NE of Sitting Bull Falls, Eddy Co, 23 Mar (RWH, RES). E. quaderna, 5.0 - 5.5 mi E of Emory Pass, NM 90, 7200', Sierra Co, 28 Mar and 31 Jul (RES). Z. cyna, Rattlesnake Spgs, EDDY Co, STATE, ZONE 4, NORTH, 6 Jul (SJC, RWH). H. ceraunus, Guadalupe Cn 4700', Peloncillo Mts, Hidalgo Co, 4 Aug (JAS/RES). E. amyntula, Emory Pass, SIERRA Co, SOUTH, 5 Aug (SJC). C. argiolus (ladon), Sawpit Crk, 2 mi N of Kingston, SIERRA Co, 31 Jul (SJC). E. battoides, Emory Pass, SIERRA Co, 5 Aug (SJC). P. acmon, GUADALUPE Co (SJC); 1.5 mi N of San Jon, QUAY Co, 20 May (PAO); Cabresto Cn 8000', Taos Co, 27 Jul (CDF). E. ares and E. zela cleis, Guadalupe Cn 4700', Peloncillo Mts, Hidalgo Co, 4 Aug (SJC, JAS, RES). A. nais, Golondrina Mesa 8000', N Jemez Mts, RIO ARRIBA Co, NORTH, 30 Jun 1985 (RWH). L. bachmanii, Bullis Cn, Guadalupe Mts, CHAVES Co, 28 Jul (RWH/SJC); Santa Rosa Dam, GUADALUPE Co, 4 Jul (SJC); NM 120, 2 mi W of Canadian Rvr, MORA Co, 29 Jun (SJC); Caprock Park, QUAY Co (USNM/PAO). H. charitonius, Lewis Cn, Guadalupe Mts, CHAVES Co, NE, 28 Jul (SJC); Rattlesnake Spgs, EDDY Co, SE, 19 Jul (RWH/SJC). A. vanillae, Rattlesnake Spgs, EDDY Co, 21 Jun (RWH/SJC); Santa Rosa Dam, GUADALUPE Co, 4 Jul (SJC); Skeleton Cn, Peloncillo Mts, HIDALGO Co, SW, 1 Aug (SJC). S. cybele, Los Alamos Rsvr 8000', LOS ALAMOS Co, 26 Aug 1985 (RWH). S. aphrodite, 4 mi W of Los Alamos Rsvr 8500', LOS ALAMOS Co, 31 Aug 1984 (SJC/RWH). S. atlantis, CIBOLA Co (confirmatory), 1985 (CDF). S. mormonia, Los Alamos Ski Run 10000', LOS ALAMOS Co, 7 Jul 1985 (RWH). B. titania, Los Alamos Ski Run 10000', LOS ALAMOS Co, 7 Jul 1985 (RWH); Cerro Vista, MORA Co, NE, 28 Jun EARLY (SJC). T. fulvia, Guadalupe Cn 4700', Peloncillo Mts, HIDALGO Co, SW, 4 Aug (JAS/RES); hill 3 mi ENE of Hillsboro 5300', NM 90, SIERRA Co, 28 Mar and 31 Jul (RES); Chaua Lama Overlook 7000', Rio Grande Gorge, TAOS Co, 24 Aug 1985 (RWH). T. theona, hill 3 mi ENE of Hillsboro 5300', NM 90, Sierra Co, 31 Jul (RES). C. janais, Rattlesnake Spgs, EDDY Co, STATE, ZONE 4, NORTH, 19 Jul (RWH/SJC). C. lacinia, Roswell, CHAVES Co (confirmatory) (USNM/PAO). C. definitiva, Sitting Bull Falls 4660', Eddy Co, 23 Mar EARLY (RWH). C. neumogeni sabina, NM 90, 5.4 mi E of Emory Pass 7000', SIERRA Co, 28 Mar (SJC, RES). A. texana, Lewis Cn, Guadalupe Mts, CHAVES Co, 28 Jul (SJC). P. vesta, Santa Rosa Dam, GUADALUPE Co, NE, 4 Jul (SJC). P. tharos ("A"), Sitting Bull Falls 4660', EDDY Co, 23 Mar; NM 120 at Canadian Rvr, HARDING/MORA Counties, NE, 29 Jun; US 380 at Rio Grande Rvr, SOCORRO Co, 14 Sep (all SJC). P. selenis (tharos "B"), incorrectly referred to pascoensis, rd to Los Alamos Ski Run 8000', LOS ALAMOS Co, 7 Jul 1985 (RWH). P. pratensis (campestris), NM 219, 3 mi S of I-40, GUADALUPE Co, 26 Jul 1977 (ROK). P. picta, NM 120 at Canadian Rvr, HARDING Co, 29 Jun (SJC). P. mylitta, Santa Rosa Dam, GUADALUPE Co, SE, 4 Jul (SJC); NM 90, 5.4 mi E of Emory Pass 7000', Sierra Co, 28 Mar (SJC, RES). P. satyrus, Spring Cn, Florida Mts, LUNA Co, 27 Mar (SJC). P. faunus hylas, Los Alamos Rsvr 8000', LOS ALAMOS Co, 26 Aug 1985 (RWH). P. zephyrus, Los Alamos Ski Run 10000', LOS ALAMOS Co, 7 Jul 1985 (RWH). N. milberti, Capilla Peak, Manzano Mts, TORRANCE Co, 30 Jul 1985 (MET). V. carye annabella, Capilla Peak, Manzano Mts, TORRANCE Co, 30 Jul 1985 (MET). J. nigrosuffusa, Guadalupe Cn 4700', Peloncillo Mts, Hidalgo Co, 4 Aug (RES). A. jatrophae, Rattlesnake Spgs, EDDY Co, STATE, 13 Sep (SJC). B. archippus obsoleta, Guadalupe Mts, EDDY Co, SE, 6 Jul (SJC). B. astyanax arizonensis, Guadalupe Cn 4700', Peloncillo Mts, Hidalgo Co, 4 Aug (SJC). B. weidemeyerii, Los Alamos Ski Run, 10000', LOS ALAMOS Co, 7 Jul 1985 (RWH); NM 90, 5.4 mi E of Emory Pass 7000', SIERRA Co, 31 Jul (RES). A. bredowii, Lewis Cn, Guadalupe Mts, CHAVES Co, 26 Sep (SJC); JFK Cg, W of Manzano Mts, VALENCIA Co, 25 Jul 1985 (MET). E. monima, Cloverdale, HIDALGO Co, STATE, 1 Aug (K Roever/SJC). M. petreus, Mangas Spgs, GRANT Co, 2nd STATE, NORTH, 20 Jul (R A Fisher, Jr/CDF). A. leilia, Guadalupe Cn 4700', Peloncillo Mts, Hidalgo Co, 4 Aug (RES); Florida Mts, LUNA Co, SE, 30 Jul (SJC). A. andria, Santa Rosa Dam, GUADALUPE Co, 12 Apr (SJC); Taos, TAOS Co, NW, 30 Jul (PAO). C. pertepida, Bullis Cn, Guadalupe Mts, CHAVES Co, 17 Jun; NM 120, 3 mi E of Ocate, MORA Co, 29 Jun (both SJC). C. pegala, Rio Grande gorge, 7 mi W of Cerro, TAOS Co, 27 Jul 1985 (MET); JFK Cg, W of Manzano Mts, VALENCIA Co, 25 Jul 1985 (MET). C. meadii, Guadalupe Rim, OTERO Co, 30 Aug (SJC); Rio Grande gorge at Chiflo Tr 6500', TAOS Co, NE, 24 Aug 1985 (RWH). O. chryxus and O. alberta, Cerro Vista, MORA Co, 28 Jun (SJC). D. gilippus, NM 120 at Canadian Rvr 5400', HARDING Co, NE, 6 Aug (RES).

NOTES: At Mangas Spgs, Grant Co, 21-22 Jul and 2-4 Aug, CDF found the following: Erinyis alope (?STATE), Manduca florestan (?STATE), M. quinquemaculata, M. sexta, Pachysphinx occidentalis, Sagenosoma elsa, Smerinthus cerisyi, Sphinx dollii, Estigmene acrea, Ptychoglene murina, Pygarctia sp, Datana neomexicana, Furcula scolopendrina, Schinia gaurae, Catocala arizonae, C. euphemis, C. piatrix, Nemoria rindgei, N. ?festaria, Gloveria arizonensis, Quadrina diazoma, Sphingocampa hubbardi. SAJ found Gloveria arizonensis 3 mi W of Snow Lk, Catron Co, 5 Jul 1985 (det RES). PAO found Euproserpinus wiesti larvae on Oenothera, nr San Jon, Quay Co, 20 May. RES found Kodiosoma otero (det CDF) on the hill 3 mi ENE of Hillsboro 5300', NM 90, Sierra Co, 28 Mar. JPT found 5th instar larvae of Hemileuca conwayae (=chinatiensis) feeding on flowers of Rhus microphylla nr Whites City, Eddy Co, 6 Apr.



ZONE 5 PLAINS: SASKATCHEWAN, MANITOBA, NORTH DAKOTA, SOUTH DAKOTA, NEBRASKA, KANSAS. Coordinator: Richard C. Rosche (RCR). Contributors: Tim Bauer (TBA via ND), Tanya Bray (TBr via RCR), Linda Bringham (LB via CAE), M. Brohman (MB via RCR), K. Brown (KB via RCR), David Carter (DC via CAE), Neil Dankert (ND), L. Deschene (LD via RRH), Judy Dryden (JD via BLG), Mike Elliston (ME), Charles A. Ely (CAE), Janet Fincham (JF via CAE), Dan Fox (DFo via ND), Denise Fritz (DFr via ND), E.A. Froemel (EAF), Paul Gaynor (PG via WHH), Bonnie L. Gibbons (BLG), R. Gleason (RGL via ND), Roger Grigg (RGR via ND), Robin Harding (RH via ND), J. Richard Heitzman (JRH), Donald F. Hooper (DFH via RRH), Ronald R. Hooper (RRH), William H. Howe (WHH), John C. Jordison (JCJ), Teta Kain (TK via BP), Paul Klassen (PK), Linda Kobs (LK via CAE), Jeff Kissler (JKi via ND), Jeremy Kuhn (JKu via CAE), Randy Lawson (RL via RCR), Douglas R. Long (DRL), John T. McBurney (JTM), Mick Mehugh (MMc via CAE), B. McKillop (BM via PK), Mike Mueller (MMu via WHH), Kerry Nadobny (KN via RCR), Harold G. Nagel (HGN), James Oberfoell (JOB via RAR), Paul A. Opler (PAO), Mindee Ostendorf (MO via ND), Jean Oswalt (JO via CAE), Barbara Padelford (BP), Loren Padelford (LP), Amy Pteper (AP via RCR), W. Preston (WP via PK), Floyd W. Preston (FWP), June D. Preston (JDP), Brent Radke (BR via CAE), Lanny Randolph (LR via ND), Neil Ratzlaff (NR via BP), James Reiser (JR), Marvin E. Rolfs (MER via CAE), Keith Roney (KR via RRH), Dorothy J. Rosche (DJR), Adam Royer (AR via RAR), Jesse Royer (JRo via RAR), Ronald A. Royer (RAR), Ida Sands (IS via BLG), Marvin D. Schwilling (MDS via CAE), Ward Schrack (WS via HRN), James A. Scott (JAS), James Smith (JS via RCR), Ray E. Stanford (RES), Al Steutter (AS via ND), Phil Swartz (PS via ND), Maxine Vocke (MV via ND), Eric Volden (EV via RCR), John Weber (Jr), (JW), Ione Werthman (IW via BP), Barbara L. Wilson (BLW), Vernon Wranosky (VW via CAE). COUNTY, STATE (in caps) = new county, state records, NORTH, SOUTH, EARLY, LATE, etc. (in caps) are also considered unusual by the contributor and/or coordinator. Abbreviations: BS=Biological Station; CG=Campground; coll=collected/collection; Co/Co's= county/counties; CSC=Chadron

State College; E=east; Ft=Fort; km=kilometers; L=Lake; max=maximum; mi=mile/miles; Mts=Mountains; N=north; NE=northeast; NG=National Grassland; NM=National Monument; NP=National Park; NWR=National Wildlife Refuge; NW=northwest; PP=Provincial Park; Pres=Preserve; Prov=Provincial; PF=Provincial Forest; R=River; S=south; SD=South Dakota; SE=southeast; SF=State Forest; sp=species; SP=State Park; SRA=State Recreation Area; SW=southwest; USNM=United States National Museum; W=west; WMA=Wildlife Management Area.

SASKATCHEWAN. Early April was like summer, which started things developing; this was followed by a month of cool weather with frost on many of the nights, resulting in a scarcity of butterflies throughout the season. No southern stray species of butterflies were reported. Some species of moths, however, occurred in fair numbers. Provincial Coordinator: RRH. Contributors: LD, DFH, KR.

BUTTERFLIES: *Ancyloxypha numitor*, Hudson Bay, NORTH, 9 July (DFH). *Enodia anthedon*, Meadow L Park, WEST, 19 July (KR). *Satyroides eurydice*, Hudson Bay, NORTH, 9 July (DFH).

MOths: SPHINGIDAE - *Pachysphinx modesta*, Punnichy, 13 Aug, second brood (RRH). NOCTUIDAE - *Hormisa absorptalis*, Ft Qu'Appelle, WEST, 24 July (RRH). *H. bivittata*, Shoal L, PROVINCIAL RECORD, 6 July (RRH). *Phalaenostola hanhami*, Ft Qu'Appelle, WEST, 13 July (RRH). *Calyptra canadensis*, Ft Qu'Appelle, 19 July (RRH). *Ascalapha odorata*, Regina, 31 July (LD).

MANITOBA. Early spring was very wet, followed by a very warm, dry period, the remainder of the season being interspersed with prolonged cool, cloudy, moist spells. Flight periods were either retarded or advanced, causing frustration for the collector. Most lepidoptera were down in numbers, even less being seen than in 1985, some, usually common species, being conspicuous by their absence. Cool, cloudy, and humid conditions, with very few sunny periods from early Sept through mid-Oct halted most butterfly activity for the season. Few southern strays were reported. Provincial Coordinator: PK. Contributors: ME, BM, WP, FWP, JDP.

BUTTERFLIES: Most skippers, especially Pyrginae, were scarce, some not being seen at all. *Oarisma powesheik*, moderate numbers near Tolstoi and Stuartburn, E of Red R about 8 km N of Minnesota border, 27 June-8 July; first taken in Manitoba by Catling in 1985 in the Vita area where it was reported to be abundant in July (PK). *O. garita*, two worn males near Tolstoi and Stuartburn, EAST, 27 June (PK). *Thymelicus lineola*, common at Winnipeg (ME); 4 males and a female taken NW of Elm Creek, WEST, 16 July (PK); 2 males and a female, Eriksdale, 19 July (BM, WP), probably a northwestern range extension of the eastern North American population (PK). *Hesperia leonardus*, only one seen all season, a male, Sandilands PF, 12 Aug (PK). *H. pawnee*, locally common in the Melbourne area (PK). *H. dacotae*, small numbers in the Tolstoi-Stuartburn area, SOUTHEAST, 27 June-8 July (PK). *H. sassacus*, 12.5 mi E of McCreary, 30 June-2 July and 10 mi NE of McCreary, 2 July (FWP, JDP). *Papilio machaon*, locally in moderate numbers in the N near Thompson, 17-19 June (PK); near Cowan, 10-11 June (FWP, JDP); Clearwater L PP, 16-17 June (FWP, JDP); well worn in Porcupine Hills, 18 June (FWP, JDP). *Pterourus glaucus*, scarce in the south. *Artogeia rapae*, extremely high numbers at Winnipeg (ME) and widespread and very abundant in southern Manitoba (PK), late Aug and early Sept. *Euchloe ausonides*, common, Sandilands PF, 4-8 June (FWP, JDP). *Colias alexandra*, locally abundant in the L Andy area, Riding Mt NP (PK); taken at Ponton, EAST, in northern Manitoba (PK); near Onanole, 29 June-4 July (FWP, JDP). *C. gigantea*, rare, Riding Mt NP (PK); near Onanole, 29 June-4 July (FWP, JDP). *C. interior*, common, 12.5 mi E of McCreary, 29 June-2 July (FWP, JDP). *Epidemia dorcax*, small numbers at L Andy, Riding Mt NP at *Potentilla* sp (PK); taken at Elm Creek for the first time (PK). *Incisalia augustus*, near Cowan, 10-11 June (FWP, JDP). *Everes amyntula*, Clearwater L PP, 16-17 June (FWP, JDP). *Glaucopsyche lygdamus*, common, Sandilands PF, 4-8 June (FWP, JDP); fairly common, Duck Mt PP, 11-12 June (FWP, JDP); Clearwater L PP, 16-17 June (FWP, JDP). *Lycaeides argyrognomon*, common, 12.5 mi E of McCreary, 30 June-2 July (FWP, JDP). *Plebejus saepiolus*, common, Sandilands PF, 4-8 June (FWP, JDP). *Agriades franklinii*, Sandilands PF, 6 June (FWP, JDP); coll, Cowan, 11 July and at Grahamdale, 16 July (PK). *Euptoieta claudia*, abundant and very widespread, 20 May-30 Sept, it being the most common and widespread butterfly in S Manitoba during Aug (PK, ME); it prefers flax fields in agricultural areas (PK); larva found feeding on garden *Viola* sp at Winnipeg, third week of Oct, LATE (ME). *Speyeria idalia*, worn male coll, Sandilands PF, 12 Aug, fourth Manitoba record (PK). *S. mormonia*, viable colony, L Andy area, Riding Mt NP, 17-21 Aug; each of the few previous Manitoba records consisted of a single specimen, except in one case where two were taken (PK). *Procllossiana eunomia*, Clearwater L PP, 16-17 June (FWP, JDP); near Onanole, 29 June-4 July (FWP, JDP). *Clossiana selene*, 12.5 mi E of McCreary, 30 June-2 July and 10 mi NE of McCreary, 2 July (FWP, JDP). *C. bellona*, fairly common, Duck Mt PP, 11-12 June (FWP, JDP). *Charidryas nycteis*, 1 female, 12.5 mi E of McCreary, 1 July (FWP, JDP). *C. harrisii*, 12.5 mi E of McCreary, 30 June-2 July (FWP, JDP). *Phyciodes tharos*, common, Sandilands PF, 4-6 June (FWP, JDP); 12.5 mi E of McCreary, 30 June-2 July (FWP, JDP). *P. pascoensis*, 10 mi NE of McCreary, 2 July (FWP, JDP). *P. batesii*, 2 mi N of Easterville Rd on Prov Hwy 10, South of The Pas, 17 June (FWP, JDP). *Aglais milberti*, Winnipeg, 29 Mar, EARLY (ME). *Vanessa virginianensis*, 15 males and a female taken in 1986 by PK, more than ever taken by this collector in all previous years in Manitoba. *V. cardui* very scarce, only 3 taken by 5 collectors (PK). *V. atalanta*, very scarce, only 3 being taken all season (PK). *Basilarchia arthemis*, extremely common, 10 mi NE of McCreary, 2 July (FWP, JDP). *Enodia portlandia*, 10 mi NE of McCreary, 2 July (FWP, JDP). *Satyroides eurydice*, 12.5 mi E of McCreary, 30 June-2 July and 10 mi NE of McCreary, 2 July (FWP, JDP). *Coenonympha inornata*, Birds Hill PP, 7 June and near Cowan, 10-11 June (FWP, JDP). *Oeneis macounii*, common, Sandilands PF, 4-8 June (FWP, JDP). *O. uhleri*, common, near Cowan, 10-11 June (FWP, JDP). *O. jutta*, near Riding Mt NP, 19-20 June and 29 June-4 July (FWP, JDP). *Danaus plexippus*, first noted 24 June when they were quite common and rather worn; freshly emerged individuals quite common early to mid-Aug; last seen 27 Aug (PK).

NORTH DAKOTA. In the western half of the state the winter was extremely mild, spring came very early, and normal rainfall occurred throughout the first half of the season. Following a dry season during 1985, many populations in the badlands were reduced in numbers. One new resident biologist collected 101 butterfly species statewide and added 125 county records, only the more noteworthy being included here. Welcome to ZONE 5 State Coordinator, RAR. Contributors: Job, JDP, AR, JRo (all RAR unless otherwise indicated).

BUTTERFLIES: *Epargyreus clarus*, common, DUNN Co, 4 June. *Erynnis icelus*, one, W slope Killdeer Mts, 18 May and one, Little Missouri SP, DUNN Co, 4 June. *E. brizo*, one worn, Turtle Mt SF, Bottineau Co, 30 May. *E. persius*, Little Missouri SP, Dunn Co, 17 May. *Ancyloxypha numitor*, common in several localities in BOTTINEAU, MCHENRY, and WARD Co's, early July. *Oarisma garita*, uncommon, Ward and Slope Co, 4 June-10 July. *Yvretta rhesus*, two males, Slope Co, 24-25 May. *Hesperia uncas*, uncommon but widespread, WARD and MOUNTAIN Co, mid-June; pair in copula, Slope Co, 22 June (AR). *H. comma*, one male, 8 Aug and common, Slope Co by 26 Aug; common but worn, Burlington and WARD Co, 27 Aug. *H. ottoe*, locally common, WARD Co, by 28 June. *H. pawnee*, one female, WARD Co, 27 Aug; 4 coll, Burning Coal Vein OG, Slope Co, 26 Aug (Job). *H. dacotae*, locally fairly common, WARD Co, NORTHWEST, 18 June-4 July; associated with *H. ottoe*, but flying downslope; females uncommon. *Polites coras*, uncommon, WARD Co, 28 June-4 July. *P. origenes*, common to abundant, WARD Co, 27 June. *P. mystic*, abundant, Upper Souris NWR, 28 June; common throughout WARD Co, late June. *Wallengrenia egeremet*, one female, Ransom Co, 13 July. *Atrytone arogos*, one male near Burlington, WARD Co, NORTHWEST,

27 June (JRo). A. logan logan, common, Ransom Co, 13 July; A. logan lagus, uncommon, Slope Co, 22 June and 12 July; intermediate specimens fairly common near Burlington, WARD Co, 27 June-10 July. Poanes massasoit, absent from McCabe's Richland Co site, but moderately common in Mirror Pool WMA, Sheyenne NG, Ransom Co, 13 July. P. hobomok, common to abundant, Turtle Mts, Bottineau Co, 30 May and 8 June; one female, form "pocahontas", in acid bog on Canadian border, Bottineau Co, 8 June. P. viator, abundant, Mirror Pool WMA, 13 July and uncommon but widespread and local throughout Sheyenne NG, Ransom Co, 13-14 July. Euphyes dion, one female, Mirror Pool WMA, Ransom Co, 13 July. E. ruricola, uncommon, WARD Co, 4 and 12 July. Amblyscirtes oslari, uncommon, DUNN Co, 16 June. Megathymus texanus, in peak flight, Burning Coal Vein OG, Slope Co, 20 June. Papilio bairdii, common, Slope and Billings Co, 24 May, 25 June, 12 and 28 July. Pontia occidentalis, two males, E slope Killdeer Mts, DUNN Co, 23 June; very common, J. Clark Salyer NWR, McHENRY Co, 20 July. Gaeides xanthoides, abundant in WARD, McHENRY and Bottineau Co, 22 June-7 July. Hyllolycaena hyllus, uncommon, WARD Co, 27-28 June. Chalceria rubidus, males abundant with only two females, Slope Co, 22 June. Epidemia helloides, sporadic but widespread, five males near Amidon, Slope Co, 22 June; WARD Co, 17 Aug. Harkenclenus titus, Slope Co, 12 July; one female, McHENRY Co, 7 July. Satyrus acadica, widespread and common, WARD Co, 7 and 9 July; Bottineau Co, 7 July; abundant, RANSOM Co, 14 July. S. edwardsii, common, Bottineau Co, 30 June; worn individuals, McHENRY Co, NORTHWEST, 7 July; WARD Co, NORTHWEST, 10 July; BARNES Co, 13-14 July; ROLETTE Co, 20 July. S. calanus, very common, WARD, McHENRY, and BOTTINEAU Co's, 20 June-mid-July; abundant, BARNES Co, 13-14 July. S. liparops, locally common S of Burlington, WARD Co, 28 June; abundant but worn, Turtle Mts, 20 July. Mitoura siva, locally common W of Burning Coal Vein OG, Slope Co, 24-25 May, badly worn by 22 June; Little Missouri SP, Dunn Co, 1, 4 and 7 June. Incisalia polios, locally abundant, W slope Killdeer Mts, Dunn co, 17 May. I. eryphon, abundant W of Burning Coal Vein OG, Slope Co, 18 and 25 May. Everes amyntula, DUNN Co, 4 June and WARD Co, 11 June. Celastrina argiolus, nowhere common; WARD, Bottineau, Dunn, and McKENZIE Co's, 3-17 May and 28 June. Icaricia acmon, locally common, Slope Co, 12 July and 28 Aug. Apodemia mormo, one male and two females coll, Slope Co, 7-8 Aug. Euptoieta claudia, abundant all season throughout. Speyeria idalia, locally common, males only; Sheyenne NG, Ransom Co, 13 July. Clossiana bellona, RANSOM Co, 13 July. Charidryas acastus, common, Little Missouri SP, 4 and 16 June. Phyciodes tharos, DUNN Co, 4 and 16 June; McHENRY Co, 7 July. P. pascoensis, abundant, Turtle Mt SF, BOTTINEAU Co, 30 May and 8 June. Polygonia sp, all very scarce. P. comma, WARD Co, 6 July; CAVALIER Co, 11 May. P. progne, WARD Co, 6 July. Aglais milberti, one female, Canadian border bog, Bottineau Co, 8 June. Vanessa cardui, sporadic and uncommon. Basilarchia arthemis, common, WARD Co, 18 and 27 June; one, Bottineau Co, 30 June. B. weidemeyerii oberfoelli, locally common, Dunn Co, 16 June and Slope Co, 22 June. Enodia anthedon, locally abundant, BOTTINEAU Co, NORTHWEST, 30 June; abundant, BARNES Co, 13 July; WARD Co, NORTHWEST, 6 July; RANSOM and RICHLAND Co's, 13-14 July. Satyrodes eurydice, widespread in Bottineau, WARD, and McHENRY Co's, late June-July; RICHLAND and RANSOM Co's, 13 July. Megisto cymela, uncommon, L Metigoshe SP, Bottineau Co, 8 June; one male, WARD Co, 6 July; two, BARNES Co, 13 July; one each coll RANSOM and RICHLAND Co, 13 July. Cercyonis meadii, one female and abundant males, near Burning Coal Vein OG, Slope Co, 28 July; females common in same area, nectaring on Erigonum sp, first week of Aug. Oeneis uhleri varuna, abundant in west, 24 May-4 June; taken in Slope, WARD, Montrail, Bottineau, Dunn, and RENVILLE Co's.

SOUTH DAKOTA. Contributors: JTM, FWP, JDP, RCR, RAR.

BUTTERFLIES: Oarisma poweshiek, Sica Hollow SP, Marshall Co, 7 July (FWP, JDP). Hesperia dacotae, Sica Hollow SP, Marshall Co, 7 July (FWP, JDP). Neophasia menapia, abundant with males predominating near Mt Rushmore, Black Hills, Pennington Co, 9 Aug (RAR); 5-6 seen, Sylvan L area, Custer Co, 24 Aug, LATE (RCR). Colias philodice, C. eurytheme, and C. alexandra krauthii, all flying together, Little Spearfish Canyon, Lawrence Co, 9 July (FWP, JDP). Everes comyntas, one, Kadoka, JACKSON Co, 24 Aug (JTM). Glaucopteryx piasus, one fresh female coll, N Cave Hills area, HARDING Co, 2 June (RAR). Speyeria cybele, one, Kadoka, JACKSON Co, 24 Aug (JTM). S. atlantis, the dark form atlantis was common compared to previous visits, although the ratio of dark atlantis to light lurana was about 1:4, Little Spearfish Canyon, 9 July (FWP, JDP).

NEBRASKA. The collecting season was about an average one, although it tended to be early in the east and somewhat late in the west during the early months. Prolonged mild weather in the west during Oct resulted in much late moth activity. The season will long be remembered for its rash of southern stray butterflies, all of those reported being listed below. About 41 persons contributed 362 new county butterfly records, only the more noteworthy of which follow. Four new state butterfly records are listed below. An important collection from Furnas Co, belonging to Douglas R. Long, contributed much significant information to the general knowledge of Nebraska lepidoptera; all data under DRL that follow is from prior to 1986 unless otherwise indicated. Special thanks is due Barbara and Loren Padelford and Neil Dankert for their many contributions to the season summary effort. State coordinator: ND. Contributors: TBa, YBr, MB, KB, CAE, Dfo, DFr, EAF, RGl, RGr, RH, JcJ, TK, JkI, RL, DRL, JTM, KN, HGN, PAO, MO, BP, LP, AP, LR, NR, JR, DJR, RCR, WS, JAS, JS, RES, AS, PS, MV, EV, JW, IW, BLW.

BUTTERFLIES: Staphylus hayhurstii, photo, Fontenelle Forest, 26 May (JW); 1 seen, Fontenelle Forest, 2 Aug (Xerces Count); photo, 7 Aug (BP, LP), all SARPY Co. Erynnis juvenalis, coll, near Richland, COLFAX Co, 10 July (JAS). E. funeralis, photo, Schramm Park SRA, SARPY Co, 28 Sept (BP, LP), verified PAO, RES. E. baptisiae, 1 coll, Niobrara Valley Pres, KEA PAHA Co, NORTHWEST, 28 June (ND); 3 coll and 1 seen, Pawnee Prairie, PAWNEE Co, 2 Aug (ND, DFr), all verified RES. Pyrgus communis, max 35, Crane Meadows, HALL Co, 9 Aug (ND, RH, LR). Ancyloxypha numitor, coll, FURNAS Co (DRL); 1 coll, Lewellen, GARDEN Co, 29 Aug (RCR); both SOUTHWEST. Thymelicus lineola, STATE; specimen USNM, Silver Creek, POLK Co, 1936 (via PAO). Hylephila phyleus, photo, Douglas Co, 3 Aug (JW); SARPY Co, 19 Oct (BP, LP). Hesperia uncas, 1 coll, Niobrara Valley Pres, KEA PAHA Co, EAST, 31 Aug (RH), verified RES. H. comma, 1 coll, Niobrara Valley Pres, KEA PAHA Co, EAST, 31 Aug (RH). H. ottoe, 1 coll, 3.5 mi S of Yankton, SD, CEDAR Co, 10 July (JAS). H. pawnee, 2 coll, near Lewellen, GARDEN Co, 29 Aug (RCR); 20 coll and seen near Parks, DUNDY Co, 30 Aug (RCR); max 180 coll or seen, including 124 on a mile of roadside sunflowers, Niobrara Valley Pres, Keya Paha Co, 31 Aug (ND, LR, RH, HGN). Polites coras, max 47 coll or seen, Crane Meadows, HALL Co, 9 Aug (ND, RH, LR). Wallengrenia egeremet, 2 males and a female coll, Niobrara Valley Pres, Brown and Keya Paha Co's, second consecutive year, 25-26 June (ND), verified RES; 2 males and a female coll, near Richland, COLFAX Co, 10 July (JAS); 1 female coll, Smith L, SHERIDAN Co, 17 July (JAS). Pompeius verna, 1 female coll, Niobrara Valley Pres, Keya Paha Co, second consecutive year, 28 June (ND); 1 male coll, near Richland, COLFAX Co, 10 July (JAS). Atrytone argos, coll 3.5 mi S of Yankton, SD, CEDAR Co, 10 July (JAS). A. logan, coll, near Potter, GHEYENNE Co, 9 July (JAS); coll, 16 mi S of Yankton, SD, CEDAR Co, 10 July (JAS); 9 seen, Fontenelle Forest, SARPY Co, 2 Aug (Xerces Count); 19 coll and seen, Pawnee Prairie, PAWNEE Co, 2 Aug (ND, DFr); 1 coll, near Arapahoe and 4 seen near Oxford, FURNAS Co, 31 Aug (RCR). Poanes hobomok, 1 coll, Limestone Bluffs WMA, FRANKLIN Co, 18 May (ND); coll, FURNAS Co, SOUTHWEST (DRL). P. zabulon, 1 coll, near Beatrice, GAGE Co, 16 Aug 1985 (ND). P. taxiles, 2 coll, Niobrara Valley Pres, Brown Co (ND, HRN), second consecutive year for this easternmost population, verified RES, PAO; specimen CSC coll, Beaver Creek, SHERIDAN Co, 3 July 1984 (RL, KB). P. viator, 2 males and 3 females coll, Smith L, Sheridan Co, 17 July (JAS). Amblyscirtes oslari, 2 coll and 3 seen, Niobrara Valley Pres, KEA PAHA Co, 31 May (ND). A. vialis, coll, near Richland, COLFAX Co, 10 July, LATE (second generation ?) (JAS); 3

coll, Niobrara Valley Pres, BROWN and KEYA PAHA Co's, 1-3 June (ND). *Lerodea eufala*, specimen USNM, Omaha, DOUGLAS Co (via PAO); photo, DOUGLAS Co, 26 Sept (JW); 2 coll, near Doniphan, HALL Co, 9 Aug (ND). *Megathymus texanus*, males common, Valentine NWR, Cherry Co, 8 June (JJC). *Battus philenor*, 3 coll, FURNAS Co, SOUTHWEST, all pre-1962 (DRL). *Eurytides marcellus*, 3 coll (2 spring and 1 autumn form), FURNAS Co, WEST, all pre-1962 (DRL). *Papilio bairdii*, Cedar Point BS, KEITH Co, 15 July-16 Aug (JR); 3 males and 4 females coll, FURNAS Co, 6 pre-1962 and 1 post-1975 (DRL). *Heraclides cresphontes*, Cedar Point BS, KEITH Co, WEST, 15 July-16 Aug (JR); Sary Co, 5 Oct, LATE (BP, LP); 3 coll, FURNAS Co, post-1975 (DRL). *Pterourus glaucus*, Cedar Point BS, KEITH Co, 15 July-16 Aug (JR); 6 dark females, Neale Woods, Douglas Co, 26 July (Xerces Count); 1 dark female coll, Niobrara Valley Pres, Keya Paha Co, 31 Aug (RH, LR); 1 dark female coll, near Cambridge, Furnas Co, 31 Aug (RCR). *Phoebis senae*, major influx; Cedar Point BS, KEITH Co, WEST, about 1 Aug (JR); 1 coll, Kearney, Buffalo Co, 21 Sept (ND); 11 seen, Schramm Park SRA, 27 Sept (TBr) and photo, 28 Sept (BP, LP), both SARY Co; widespread in unusually large numbers in Douglas and Sary Co's through 19 Oct (BP, LP); 6 coll, FURNAS Co, WEST, 4 pre-1962, 2 post-1975, plus 1 in 1986 (DRL). *Kricognia lyside*, 1 male and 1 female coll pre-1962, FURNAS Co, second state record and apparently the first since 1911 (DRL). *Eurema mexicana*, the only reports were: 2 coll, Sowbelly Canyon, Sioux Co, 12 July (DJR, RCR); Cedar Point BS, Keith Co, late July (JR). *Pyrisitia proterpia*, STATE; photo, Schramm Park SRA, SARY Co, 28 Sept (BP, LP), verified PAO. *P. lisa*, 1 coll, FURNAS Co (DRL). *Abaeis nicippe*, Cedar Point BS, KEITH Co, WEST, 15 July-16 Aug (JR); 1 coll pre-1962, FURNAS Co (DRL). *Feniseca tarquinius*, 1 coll, post-1975, FURNAS Co, WEST (DRL). *Epidemia helleoides*, specimen in Cal. Insect Survey Coll at Univ of Cal, Berkeley, BURT Co, EAST (via PAO). *Harkenclenus titus*, photo, Stolley Prairie, Douglas Co, July (JW); 4 coll, Niobrara Valley Pres, KEYA PAHA Co, 20 July and also 1 coll, BROWN Co, 25 July (ND). *Satyrion calanus*, male coll, near Richland, COLFAX Co, 10 July (JAS). *Mitoura gryneus*, DOUGLAS Co, 11 May (TK); 1 coll, Limestone Bluffs WMA, FRANKLIN Co, 18 May (ND); 4 coll plus 8 seen, Harlan Co Reservoir, HARLAN Co, WEST, 4 July (ND, DFr), verified RES; coll, near Richland, COLFAX Co, 10 July (JAS). *Incisalia eryphon*, 2 coll, Niobrara Valley Pres area, KEYA PAHA Co, at about the eastern limit of *Pinus ponderosa* forest in the state, 3 May (RH, DJR). *Strymon melinus*, Sary Co, 4 Oct, LATE (BP, LP). *Leptotes marina*, unusually common and widespread; 3 coll near Hazard, SHERMAN Co, 8 Aug (ND); 1 coll, near Taylor, LOUP Co, 30 Aug (ND); 1 coll, Clear Creek WMA, GARDEN Co, 1 Sept (RCR); 1 coll, near Holbrook and 2 coll near Arapaho, FURNAS Co, 31 Aug (RCR); 1 seen, Omaha, Douglas Co, 21 Sept (TBr); 1 coll, Rowe Sanctuary, BUFFALO Co, 28 Sept (ND). *Euphilotes enoptes*, STATE; 1 coll, Sowbelly Canyon, SIOUX Co, 21 June (JAS), specimen in personal coll. *Glaucopsyche piusis*, 1 coll, W Hat Canyon, SIOUX Co, EAST, 31 May (RCR). *Libytheana bachmani*, unusually common and widespread; 1 seen, Rowe Sanctuary, Buffalo Co, 5 July (HGN); 1 female coll, near Richland, COLFAX Co, 10 July (JAS); 1 seen, near Hazard, SHERMAN Co, 8 Aug (ND); photo, Platte River SP, CASS Co, 27 Aug (TW); 1 coll, near Lewellen, GARDEN Co, 29 Aug (RCR); 3 seen, Sary Co, 26 Sept (BP, LP); 4 coll, FURNAS Co (DRL). *Agraulis vanillae*, 1 adult female and 15 larvae coll, 12 larvae left, all on *Passiflora* sp, Columbus; Platte Co, 20 Sept (EAF); 2 coll, pre-1962, FURNAS Co, WEST (DRL). *Heliconius charitonius*, an unprecedented number of records, the only previous one being from 1939; one seen, Cedar Point BS, KEITH Co, 15 July-16 Aug (JR); 1 seen and photographed, 25 July, 1 seen 26 July, 3 seen 27 July, 1 seen both 31 July & 17 Aug, Neale Woods, DOUGLAS Co (EV); 1 coll, FURNAS Co, Sept 1986 (DRL). *Euptoieta claudia*, unusually common and widespread throughout. *Thessalia fulvia*, 1 coll, FURNAS Co, early 1980's (DRL). *Phyciodes pascoensis*, coll, Sowbelly Canyon, Sioux Co, 21 June (JAS). *Aglais milberti*, photo, Omaha, DOUGLAS Co, EAST, 8 Sept 1984 (NR); coll, FURNAS Co, SOUTH (DRL). *Vanessa virginiensis*, unusually widespread in larger than average numbers; max 6, Fontenelle Forest, SARY Co, 1 May (BP, LP). *V. cardui*, generally more scarce than in an average year. *V. atalanta*, hundreds in every woodlot and in streamside riparian, Cherry, Brown, and HOLT Co's, 3-4 May (DJR, RCR). *Junonia coenia*, more common and widespread than in most years; max 15 coll and seen, Crane Meadows, HALL Co, 9 Aug (ND, RH, LR). *Anartia jatrophae*, STATE; coll, pre-1962, FURNAS Co (DRL). *Basilarchia archippus*, max 33 seen, Niobrara Valley Pres, Brown Co, 25 July (ND, HGN). *B. weidemeyerii oberfoelli*, specimen at Ft Hays State Univ, KS, from KEITH Co, 6 Aug (year ?) (via CAE); 2 coll, pre-1962, FURNAS Co (DRL), both SOUTHEAST; 1 worn male coll, Niobrara Valley Pres, KEYA PAHA Co, 21 June (ND); hybrid *B. archippus* x *B. w. oberfoelli*, coll, Niobrara Valley Pres, Keya Paha Co, 27 July (ND); *B. w. oberfoelli* x *B. a. astyanax*, coll, Niobrara Valley Pres, Keya Paha Co, 21 June (JR). *Anaea andria*, photo, Sary Co, 19 Oct (BP, LP). *Asterocampa clyton*, 5 coll, FURNAS Co (DRL). *Enodia anhedon*, 1 coll and 1 seen, Niobrara Valley Pres, BROWN Co, 25 July (ND). *Coenonympha tullia*, 1 coll, pre-1962, FURNAS Co (DRL). *Danaus plexippus*, many hundreds seen, Kearney, Buffalo Co, 21 Sept (ND); mass roosting reported south of Kearney, Kearney Co, 20-21 Sept (WS); Sary Co, 28 Oct, LAST (BP, LP); fourth instar larva successfully reared on *Convolvulus* sp where it was initially found (JJC). *D. gilippus*, 1 male coll and 1 seen, Cedar Point BS, KEITH Co, 15 July-16 Aug (JR); 2 coll pre-1962 and 1 coll, post-1975, FURNAS Co (DRL).

MOTHS: OECOPHORIDAE - *Antaeotricha schlaegeri*, Niobrara Valley Pres, 2 June (ND). PYRALIDAE - *Galasa nigrinodis*, Sary Co, 13 Aug (BP, LP). GEOMETRIDAE - *Itame pustularia*, Buffalo Co, 13 June (ND). *Mellilla xanthometata*, Sary Co, 15 Aug (BP, LP). *Anavitrinella pampinaria*, Kearney, Buffalo Co, 10 May (ND). *Melanophia signataria*, Niobrara Valley Pres, Brown Co, 2 June (ND). *Erannis tiliaria*, 1-4 coll, 12 mi S of Chadron, Dawes Co, 16-30 Oct (RCR). *Lomographa vestaliata*, Kearney, Buffalo Co, 18 Apr (ND). *Lytrosia unitaria*, Niobrara Valley Pres, Brown Co, 28 June 1984 (ND). *Euchlaena serrata*, Harlan Co Reservoir, Harlan Co, 4 July (ND). *E. amoenaria*, Niobrara Valley Pres, Brown Co, 2 June (ND). *Pero honestaria*, Niobrara Valley Pres, Brown Co, 2 June (ND); Homestead NM, Gage Co, 20 Aug 1984 (ND). *Metanemia inatormaria*, Niobrara Valley Pres, Brown Co, 7 June 1985 (ND). *Nematocampa limbata*, Kearney, Buffalo Co, 13 June (ND). *Dichorda iridaria*, Kearney, Buffalo Co, 28 May (ND). *Dyspteris abortivaria*, Homestead NM, Gage Co, 3 July 1983 (ND). SATURNIIDAE - *Sphingicampa bicolor*, 3 coll, Furnas Co, WEST (DRL). *Hemileuca nevadensis*, 2 coll, Furnas Co, common one autumn in late 1970's, uncommon since (DRL). *Antheraea polyphemus*, 1 coll, Furnas Co (DRL). *Actias luna*, 3 coll, prior to 1962, Furnas Co, WEST (DRL). *Hyalophora cecropia*, 2 coll, Furnas Co (DRL). SPHINGIDAE - *Manduca sexta*, Kearney, Buffalo Co, 23 Aug 1985 (ND); 1 coll, Furnas Co (DRL). *Ceratonia undulosa*, Niobrara Valley Pres, Brown Co, 2 June (ND); 1 coll, Furnas Co (DRL). *Sphinx drupiferarum*, Kearney, Buffalo Co, 12 July 1984 (ND). *Smerinthus jamaicensis*, Niobrara Valley Pres, Brown Co, 24 June 1985 (ND); 4 coll, Furnas Co (DRL); Mirage Flats, Sheridan Co, 1986 (AP). *Paonias excaecatus*, Niobrara Valley Pres, Brown Co, 2 June (ND); 1 coll, Furnas Co (DRL). *P. myops*, Niobrara Valley Pres, Brown Co, late May (AS). *Pachysphinx modesta*, Niobrara Valley Pres, Brown Co, 2 June (ND); 4 coll, Furnas Co (DRL). *Erinymis domingonis*, Hall Co, 9 Sept, third known county, WEST (JKI). *Aellopos titan*, 1 coll, Holbrook, Furnas Co, 1983 (DRL). *Hemaris diffinis*, 1 seen, Chadron, Dawes Co, 8 Sept, LATE (RCR). *Eumorpha pandorus*, Kearney, Buffalo Co, 26 June (ND); 1 coll, Furnas Co (DRL). *E. achemon*, 1 coll, Furnas Co (DRL). *Proserpinus juanita*, 1 coll, Niobrara Valley Pres, KEYA PAHA Co, EAST, 2 June (RH). *Darapsa myron*, 2 coll, Niobrara Valley Pres, Brown Co, 2 June (ND); Sary Co, 8 Aug (BP, LP); 2 coll, Furnas Co (DRL). *Hyles lineata*, 1 seen, 12 mi S of Chadron, Dawes Co, 8 Oct, LATE (RCR). NOTODONTIDAE - *Nadata gibbosa*, Niobrara Valley Pres, Brown Co, 2 June (ND). *Hyperaeschra georgica*, Niobrara Valley Pres, Brown Co, 1 June (ND). *Pheosia rimosa*, Kearney, Buffalo Co, 2 May and Niobrara Valley Pres, Brown Co, 2 June (ND). *Odontostia elegans*, Niobrara Valley Pres, Brown Co, 2 June (ND); 1 coll, 12 mi S of Chadron, Dawes Co, 6 Aug (RCR). *Nerice bidentata*, Niobrara Valley Pres, Brown Co, 1 June (ND). *Gluphisia septentrionis*, Kearney, Buffalo Co, 1 May (ND). *Furcula cinerea*, Kearney, Buffalo Co, 15 June 1984 (ND). *Heterocampa subrotata*, Kearney, Buffalo Co, 10 May (ND). *Lochmaeus bilineata*, Kearney, Buffalo Co, 18 June (ND). ARCTIIDAE - *Spilosoma vestalis*, Niobrara Valley

Pres, Brown Co, 1 June (ND). *S. virginica*, Kearney, Buffalo Co, 1 May (ND). *Hyphantria cunea*, Kearney, Buffalo Co, 6 June 1984 (ND). *Apantesis phalerata*, Kearney, Buffalo Co, 1 June 1984 (ND). *A. anna*, Niobrara Valley Pres, Brown Co, 1 June (ND). *A. phyllira*, Niobrara Valley Pres, Brown Co, 1 June (ND). *A. oithona*, Kearney, Buffalo Co, 10 July 1984 (ND). *A. virgo*, Gage Co, 10 Aug (BP, LP). *Halysidota tessellaris*, Kearney, Buffalo Co, 23 June (ND). *Cycnia tenera*, Kearney, Buffalo Co, 17 June 1981 (ND). *C. oregonensis*, Kearney, Buffalo Co, 14 May (ND). NOCTUIDAE - *Synedroida pallescens*, Niobrara Valley Pres, Brown Co, 2 June (ND). *Ascalapha odorata*, coll, Sheridan Co, 11 July (KN). *Catocala piatrix*, photo, Sarpy Co, 5 Aug (BP, LP). *C. epione*, Platte River SP, Cass Co, 8 July (JCJ). *C. lacrymosa*, Woodhaven Park, Douglas Co, 16 July (JCJ); form "paulina", Hummel Park, Douglas Co, 18 July (JCJ). *C. neogama*, Platte River SP, Cass Co, 8 July (JCJ). *C. ilia*, Hummel Park, Douglas Co, 18 July (JCJ). *C. cerogama*, Indian Cave SP, Richardson Co, 28 June (JCJ). *C. unijuga*, Kearney, Buffalo Co, 2 July (ND); Lincoln Co, 5 Oct 1985, LATE (MO). *C. junctura*, Kearney, Buffalo Co, 7 July (ND); Hummel Park, Douglas Co, 18 July (JCJ); 1 coll, Furnas Co (DRL). *C. cara*, Kearney, Buffalo Co, 6 Sept 1984 (ND); Indian Cave SP, Richardson Co, 25 July (JCJ). *C. concumbens*, coll, Furnas Co (DRL). *C. amatrix*, Gage Co, 14 Sept 1985 (Tba). *C. illecta*, Kearney, Buffalo Co, 1 July (ND). *C. sordida*, Indian Cave SP, Richardson Co, 28 June (JCJ). *C. coccinata*, Kearney, Buffalo Co, 26 June (ND). *C. ultronia*, Indian Cave SP, Richardson Co, 28 June (JCJ). *C. mira*, photo, Sarpy Co, 28 Sept (BP, LP). *C. micronympha*, Platte River SP, Cass Co, 8 July (JCJ). *C. amica*, Platte River SP, Cass Co, 8 July (JCJ). *Tarachidia erastrionides*, Sarpy Co, 15 Aug (BP, LP). *Acontia lactipennis*, Kearney, Buffalo Co, 20 June 1984 (ND). *Eudryas unio*, Niobrara Valley Pres, Brown Co, 2 June (ND). *E. grata*, Sarpy Co, 24 Aug (BP, LP). *Psycomorpha epimenis*, coll, Furnas Co (DRL). *Melanchnra picta*, Buffalo Co, 6 May (ND). *Stretchia plusiaeformis*, 1 coll, 12 mi S of Chadron, Dawes Co, 10 Apr (RCR). *Ochropleura plecta*, Niobrara Valley Pres, Brown Co, 2 June (ND). *Spaelotis clandestina*, Niobrara Valley Pres, Brown Co, 2 June (ND). *Protoschinia scutosa*, Kearney, Buffalo Co, 26 June (ND). *Schinia meadi*, Kearney, Buffalo Co, 29 May (ND).

KANSAS. The collecting season began earlier than in the average year. For butterflies it was a spectacular year with six new species being added to the state list, five of them strays, in what was the best season since at least 1979. Some 510 new county records were obtained for the Ft. Hays State University collection, and an additional 53 were submitted from other collectors. Only the most significant records are listed below. One observer, Bonnie Gibbons, commented on very high rates of parasitism occurring among many kinds of larvae that she collected and attempted to raise. State coordinator: CAE. Contributors: LB, DC, JD, JF, FG, BLG, JRH, WHH, JCJ, LK, JKu, MMc, MMu, JO, BR, MER, IS, MDS, RES, VW.

BUTTERFLIES: *Achalarus lyciades*, LYON Co, WEST, 3 Aug, except for an earlier stray in Ellis Co (MDS). *Thorybes confusus*, RENO Co, 15 Aug 1985 (verified JRH). *Erynnis funeralis*, PAWNEE Co, 9 May, the only coll specimen all summer (MDS). *Lerema accius*, STATE; found in five counties in the southeast, WILSON, CHAUTAUQUA, MONTGOMERY, NEOSHO, LABETTE, 15-27 Sept (MDS). *Copaeodes aurantiaca*, three additional counties in the SOUTHWEST, GRAY, FORD, MEADE, 13 Aug-28 Sept (CAE, MDS). *Hesperia leonardus*, ELLIS Co, 27 Aug (BR), atypical but nearest *H. l. leonardus* (verified JRH). *H. viridis*, SOUTHWEST to SEWARD Co, 11 June (CAE). *Polites coras*, SOUTHWEST to RENO Co, 28 Apr (MER). *Wallengrenia egeremet*, WEST to OTTAWA Co, 5 July (MER) and SALINE Co, 8 July (MDS). *Pompeius verna*, CLOUD Co, WEST, 9 July (MDS). *Problema byssus*, SOUTHWEST to WILSON and WOODSON Co's, 2 July (MDS). *Poanes hobomok*, NORTHWEST to CHEYENNE Co, 7 June (CAE). *P. zabulon*, SOUTHWEST to GRAY (sight only) and FORD Co's, 13 Aug (MDS). *Amblyscirtes aenus*, FRANKLIN Co, 16 Aug (MDS), verified JRH. *A. eos*, MEADE Co, 28 Sept, fourth state record (CAE). *A. belli*, SOUTHWEST to CHEROKEE Co, 18 May (MDS); CRAWFORD & WOODSON Co's, 19-27 Aug (MDS). *Heracles ormythion*, STATE; near Stockton, ROOKS Co, 27 June (MER); near Meade, MEADE Co, 30 July (LK); worn female coll, Ottawa, FRANKLIN Co, 18 July (WHH). *Pterourus glaucus*, very scarce all season (WHH). *P. troilus*, new colony near Rantoul, Franklin Co, late July-Aug (MMu). *Appias drusilla*, BOURBON Co, 15 July (MDS). *Zerene cesonia*, very scarce (CAE). *Phoebis sennae*, abundant in the east and common and widespread in most of the west, mid-July through early fall (CAE). *P. philea*, ELLIS Co, 17 July (MER); worn male coll, Ottawa, FRANKLIN Co, 3 Aug (WHH); fresh female, Ottawa, FRANKLIN Co, 22 Sept (IS); pair, Princeton, FRANKLIN Co, Sept (JD). *Aphrissa statira*, female coll, MEADE Co, 7 July (JF). *Kricogonia lyside*, only one reported all summer, PAWNEE Co, 9 May (MDS). *Eurema mexicana*, St. Paul, NEOSHO Co, 6 Oct (BLG). *Pyrisitia nise*, STATE; Ottawa, FRANKLIN Co, 14 July (WHH); ELLSWORTH, ELLIS and RUSSELL Co (JKu) and MITCHELL Co (MDS), 8 July-4 Aug; GRAY Co, 13 (MDS) and 30 Aug (CAE); ELK Co, 26 Sept (MDS). *Feniseca tarquinius*, unusually widespread in the east with colony on dry hillside in Emporia, LYON Co, mid-July (MDS). *Phaeostrymon alcestis*, MEADE Co, 8 July (JF). *Satyrion caryaeorum*, CHASE Co, 31 May (MDS) and OSAGE Co, 20 June (MER); all verified JRH. *Calycopis cecrops*, SOUTHWEST to MONTGOMERY Co, 27 Sept and LABETTE Co, 27 Apr (MDS). *Incisalia henrici*, widespread throughout eastern quarter of state (MDS). *Lycaeides melissa*, EAST to HARVEY and FRANKLIN Co, 7-16 Aug (MDS). *Agraulis vanillae*, common and widespread in the east, with a stray WEST to MEADE Co (CAE). *Dryadula phaetusa*, STATE; slightly worn male, Hays, ELLIS Co, 15 July (DC). *Dryas iulia*, STATE; female near Holyrood, ELLSWORTH Co, 18 July (MER). *Heliconia charitonius*, ovipositing female coll, Ottawa, FRANKLIN Co, 21 July (BLG); worn female coll, Ottawa, FRANKLIN Co, 13 July (WHH); MEADE Co, 21 July (JF); worn male, ROOKS Co, 30 July (MER); RICE Co, July (JO); possible THOMAS Co record but not yet verified. *Euptoieta claudia*, very common (WHH). *Speyeria idalia*, widespread SOUTHWEST to CLARK Co, 7 June (MDS). *Thessalia fulvia*, few reported (CAE). *Anthanassa texana*, several east-central observations including a colony, CHASE Co, late Aug (MDS). *Vanessa cardui*, very scarce (WHH). *V. annabella*, MEADE Co, Sept 1985 (JF). *Basilarchia arthemis*, NORTHWEST to DECATUR Co, 6 June (CAE); regular in Hays and Ellis Co where first found in 1985. *Adelpha bredowii*, convincing sight record, Elkhart, MORTON Co, 21 Sept (MMc); another possible sight record for MEADE Co. *Mestra amymone*, none reported (CAE). *Marpesia petreus*, coll, 22 July and another seen, 12 Aug, RUSSELL Co (JKu); ROOKS Co, 30 July (MER); MEADE Co, 7 Aug (LB); ELLIS Co, 12 Aug (JKu). *Enodia anthedon*, NORTHWEST to DECATUR Co, 6 June (CAE) and PHILLIPS Co, 17 Sept (MER). *Danaus plexippus*, common in Sept and Oct; a huge gathering estimated to be in the millions was observed in trees near Olivet, Osage Co, 14 Sept (FG). *D. gilippus*, common and widespread, especially in central areas, mid-July to late Aug (CAE). *Lycoreia cleobaea*, STATE; slightly damaged female, near Emporia, LYON Co, 13 July (MDS).

MOTHS: Unless otherwise indicated all of the following were recorded at Ottawa, Franklin Co, during the season (BLG). LASIOCAMPIDAE - *Phylodesma americana*. SATURNIIDAE - *Antheraea polyphemus*, *Hyalophora cecropia*. SPHINGIDAE - *Manduca sexta*, *Dolba hyloeus*, *Ceratomia amyntor*, *Laothe juglandis*, *Amphion floridensis*, *Darapsa myron*, *Hyles lineata*. ARCTIIDAE - *Utetheisa ornatrix*, *Haploa reversa*, *Pyrrharctia isabella*, *Estigmene acrea*, *Spilosoma virginica*, *Cycnia oregonensis*. NOCTUIDAE - *Idia lubricalis*, *Scoliopteryx libatrix*, *Dysgonia smithii*, *Homophoberia apicosa*, *Acontia aprica*, *Acronicta americana*, *A. morula*, *Alypia octomaculata*, *Cucullia asteroides*, *Schinia arcigera*, and *Catocala paleogama* form "phalanga", *C. mira*, *C. titanis*, *C. minuta*, *C. connubialis* form "cordelia". At the Dorwood Nature Trail, Topeka, Shawnee Co, the following were collected, *C. innubens*, *C. epione*, and *C. habilis*, 15 July; *C. serena*, 30 July; *C. insolabilis*, *C. paleogama*, and *C. subnata*, 15 July; and *C. neogama*, 22 July (JCJ).

ZONE 6 SOUTH CENTRAL: OKLAHOMA, TEXAS, ARKANSAS, LOUISIANA. Coordinator: Ed Knudson (ECK). Contributors: Vernon A. Brou (VB), Steve Cary (SC), H.A. Freeman (HAF), Chuck Harp (CH), Richard Holland (RH), Jack Jones (JRJ), John Kemmer

(JK), Paul Opler (PO), L.J. Paulissen (LP), James Scott (JS), Charles Sekerman (CS), Mack Shotts (MS), Ray Stanford (RS), Jim Tuttle (JT), Robert Warren (RW). County in CAPS indicates new county record; STATE = state record; U.S. = United States record. Abbreviations: NP = national park; SP = state park; Psh = Parish; NWR = national wildlife refuge; WMA = wildlife management area; UV = ultraviolet light; MV = mercury vapor light; bait = baited traps or trees; flushed = collected on trees, buildings, etc., during the day.

OKLAHOMA. Contributing: CH, JS, RW. CH submitted a very impressive list of Catocala, including some specimens collected by RW, and also some interesting butterfly records; JS sent in a list of butterflies from Woods Co.

BUTTERFLIES: Hesperia attalus, Woods Co, 3-4 Sept (JS); Atrytone logan, Lerodea eufala, Amblyscirtes eos, WOODS Co, 3-4 Sept (JS); Pterourus multicaudata, Kenton, Cimarron Co, 22,23 June (CH); Strymon melinus, Brephidium exile, Libytheana bachmani, WOODS Co, 3,4 Sept (JS); Cyllopsis pertepida (STATE), Cercyonis pegala ino, Kenton, CIMARRON Co, 22,23 June.

MOTHS: 39 species of Catocala were reported by CH, including 21 species collected by RW. Of these, 7 are new state records! The most interesting Catocala species reported are innubens, 3 June - 18 July, herodias, 10,14 June, illecta, 20 May-7 June, desdemona, 9-12 June, abbreviatella, 28 May-7 June, insolabilis, 4-17 June, jair, 7-10 June, all at bait, Luther, OKLAHOMA Co (CH); minuta, Luther, OKLAHOMA Co, (STATE), 13 May at bait (CH) & McAlester, PITTSBURG Co, 11 June, at light (RW); pretiosa, Luther, OKLAHOMA Co, (STATE), 23-26 May, at bait (CH); messalina, Luther, OKLAHOMA Co, (STATE), 25 May, at bait & McAlester, PITTSBURG Co, 1 June, at light (RW); dejecta, Luther, OKLAHOMA Co, 4-17 June, at bait and McAlester, PITTSBURG Co, 10-17 June, at light (RW); junctura, Luther, OKLAHOMA Co, 5-21 June & Coyle, LOGAN Co, 14 July, at bait, (CH); meskei (STATE), hermia verecunda (STATE), frederici, junctura, at bait, and verrilliana (STATE), at MV, Kenton, CIMARRON Co, 22,23 June (CH); delilah, 30 May - 14 June, alabamae, 6 June, gracilis (STATE), 2 June, connubialis, 1 June, McAlester, PITTSBURG Co, at light, (RW).

TEXAS. Contributing: SC, HAF, RH, ECK, JK, PO, CS, RS, JT. As in Oklahoma, the big news in Texas was Catocala in record numbers, with several rare species taken and a total of 47 species reported (ECK,HAF,JK). PO & RS submitted a large list of 60 butterfly species from 20 counties, including 162 COUNTY records. CS collected 63 butterfly species in 9 Texas counties. SC & RH sent a list of 79 Butterfly species from Guadalupe Mts NP, including 25 COUNTY records. JT sent in 2 interesting Saturniidae records. Some other interesting moth records by ECK are added, including two U.S. records.

BUTTERFLIES: Cabares potrillo, New Braunfels, Comal Co, 18 Oct (CS); Erynnis brizo, Big Spring, HOWARD Co, 12 Apr (PO & RS); E. telemachus, E. meridianus, Guadalupe Mt NP, Culberson Co (SC & RH); Ancyloxypha arene, Stinga morrisoni, Guadalupe Mt NP, CULBERSON Co (SC & RH); Hesperia woodgatei, Guadalupe Mt NP, CULBERSON Co (SC & RH) & Paterson Lane (W of Austin), Travis Co, 8,9 Oct (CS); Hesperia viridis, Ballinger, RUNNELS Co, 15 Apr & Ady, HOWARD Co, 12 Apr (PO & RS); Atrytonopsis python, Guadalupe Mt NP, CULBERSON Co (SC & RH) & Big Bend NP, Brewster Co, 3 June (ECK); Poanes taxiles, Big Bend NP, Brewster Co, 3 June (ECK); Amblyscirtes texanae, 26 mi SE of Big Spring, GLASSCOCK Co, 12 Apr (PO & RS) & Guadalupe Mt NP, CULBERSON Co (SC & RH); Amblyscirtes eos, 9 mi E of Eden, CONCHO Co & 12 Apr, Ady, OLDFHAM Co, 16 Apr (PO & RS); Megathymus coloradensis, 8 mi N of Blackwell, NOLAN Co, 15 Apr (PO & RS); Megathymus ursus violae, Guadalupe Mt NP, CULBERSON Co (SC & RH); Heraclides ornithion, Madero, Hidalgo Co, 15,16 Oct (CS) and Santa Ana NWR, Hidalgo Co, 31 Aug (ECK); Appius drusilla neumoegenii, Madero, Hidalgo Co, 15,16 Oct (CS); Colias philodice, Channing, HARTLEY Co, 16 Apr (PO & RS), Guadalupe Mt NP, CULBERSON Co (SC & RH); Mitoura spinetorum (confirms STATE), Guadalupe Mt NP, CULBERSON Co (SC & RH); Sandia mcfarlandi, (sight), Sterling City, STERLING Co, 12 Apr (RS); Fixsenia polingii, Zizula cyna, Guadalupe Mt NP, CULBERSON Co (SC & RH); Thessalia fulvia, HOWARD Co & vic. Big Spring, GLASSCOCK Co, 12 Apr (PO & RS); Chlosyne definita, Phyciodes picta, P. mylitta (Confirms STATE), Guadalupe Mt NP, Culberson Co (SC & RH); Anthanassa texana, San Angelo, TOM GREEN Co, 12 Apr (PO & RS); Vanessa anabella, Guadalupe Mt NP, CULBERSON Co (SC & RH) & Ft Davis, Jeff Davis Co, 5 June (ECK); Adelpha fessonia, Hamadryas februa ferentina, Santa Ana NWR, Hidalgo Co, 3,4 Aug (ECK); Siproeta stelenes biplagiata, Marpesia petreus thetys, Madero, Hidalgo Co, 15,16 Oct (CS); Doxocopa laure, Santa Ana NWR, Hidalgo Co, 3 Aug (ECK); Danaus eresimus montezuma, Hondo Creek, Medina Co, 30 Sept (CS).

MOTHS: All collected at UV by ECK, unless otherwise noted. GRACILLARIIDAE - Neurostrota gunniella, Southmost, Cameron Co, 26 Oct; Neurobatra strigifinitella, Bellaire, Harris Co, 1 May; Marmara smilacisella, Bellaire, 6 June; Cameraria castaneaeella, Caddo Lake SP, Harrison Co, 6 Apr. OECOPHORIDAE - Chlamydastis habrolepis, Santa Ana NWR, Hidalgo Co, 31 Aug. GELECHIIDAE - Anacamptis levipedella, Inks Lake SP, Burnet Co, 28 Sept; Anacamptis tristrigella, Holophysis emblemella, Martin Dies SP, Jasper Co, 8 May. YPONOMEUTIDAE - Zelleria retinella, Martin Dies SP, JASPER Co, (STATE), 8 May. TORTRICIDAE - Retinia comstockiana, Double Lake Rec Area, SAN JACINTO Co, (STATE), 29 May; Eucosma quinqueaculana, Kirbyville, Jasper Co, 6 Oct; Talponia plummeriana, Martin Dies SP, JASPER Co, (STATE), 27 Apr. LIMACODIIDAE - Parasa indetermina, Caddo Lake SP, 3 Aug. PYRALIDAE - Oxyelophila callista, Del Rio, VAL VERDE Co, 1 June; Maraesia trapezalis, Big Bend NP, BREWSTER Co, 15 Oct; Acrobasis ostrivella, Double Lake Rec Area, SAN JACINTO Co, (STATE), 29 May; A. caryalbella, Martin Dies SP, JASPER Co, (STATE), 29 June; A. kylesi, Martin Dies SP, JASPER Co, (STATE), 27 Apr; Atheloca subrufella, Southmost, (confirms STATE), 25,26 Oct. GEOMETRIDAE - Glena zweifeli, Big Bend NP, BREWSTER Co, (STATE) (U.S.), 2-4 June; Caripeta aretaria, Kirbyville, Jasper Co, 6 Oct; Nepytia semiclusaria, Double Lake Rec Area, SAN JACINTO Co, (STATE?), 29 May; Scopula ordinata, Martin Dies SP, 15 Apr, 29 June; Ptychamalia dorneraria, Southmost, 26 Oct. LASIOCAMPIDAE - Tolype notialis, T. minta, Martin Dies SP, JASPER Co (both STATE), 27 Apr. SATURNIIDAE - Sphingicampa albolineata, Southmost, 26 Oct; Hemileuca chinatiensis (5th instar larvae on flowers of Rhus microphylla), Marathon, Brewster Co, 5 Apr (JT); Agapema galbina galbina (5th instar larvae and cocoons on Condalia ericoides), Ft Davis, Jeff Davis Co, 4 Apr (JT). SPHINGIDAE - Cauthetia spuria, Southmost, 26 Oct; Sphocodina abbotti (bait), Double Lake Rec Area, 14 June. NOTODONTIDAE - Cerura rarata, Southmost, 26 Oct.; Elymiotis notodontoides, Santa Ana NWR, 4 Aug. ARCTIIDAE - Syntomeida melanthus, Big Bend NP, 15 Oct; Poliopastea clavipes, Santa Ana NWR, HIDALGO Co, (STATE), (U.S.), 27 Oct. LYMANTRIIDAE - Orygia definita, Martin Dies SP, JASPER Co, (STATE), 27 Apr. NOCTUIDAE - Zanclonatha atrilineella, Caddo Lake SP, 6 Apr & 7 July; Phalaenophana pyramusalis, Kirbyville, JASPER Co, (STATE), 6 Oct; Latebraria amphipyroides, Santa Ana NWR (flushed), 3,4 Aug & Bentsen State Park (at bait), 30 Aug, HIDALGO Co, (STATE). [NOTE: Your coordinator is a bit embarrassed about this one, having mistakenly reported it in 1984 S.S. and stating in 1985 S.S. that it did not occur in Texas!] Catocala: The following species are of special interest, sappho (confirms Strecker's 1869 record), Garland, Dallas Co, 21 June (flushed) (HAF) and Martin Dies SP, 29 June (flushed); insolabilis, dejecta, Garland, (bait) (HAF); ulalume, Caddo Lake SP, 7 July (bait,UV,flushed); vidua, Garland (HAF); nebulosa, Martin Dies SP, JASPER Co, (STATE), 29 June (UV), and Caddo Lake SP, HARRISON Co, 7 July, (flushed); ilia, violenta, frederici, Big Bend NP, 4 June (UV); texanae, Garland, 8,9 June (bait,flushed) (HAF); texarkana, Martin Dies SP, 27 Apr (bait); pretiosa, Garland, 23 Apr (bait) (HAF); herodias, messalina, delilah, jair, Dripping Springs, Hays Co, (JK); connubialis, grynea, Shepherd, San Jacinto Co, 8 May (lights); olivia, Brazos Bend SP, Ft Bend Co, 11 May, (bait); orba, gracilis, louiseae, Double Lake Rec Area, 18 May, (bait). Other Noctuids, Parastichtis discivaria, Martin Dies SP, JASPER Co, (STATE), 8 May; Neophaenis respondens, Bellaire, (2nd U.S.), 15 July; Hyperstrotia pervertens, Martin Dies SP, (STATE), 15 Apr; Leucania ursula, Martin Dies SP, JASPER Co, (STATE),

15 Feb; Oncocnemis toddi (6th example coll.), Big Bend NP, 15 Oct; Hydroeciodes auripurpura, Big Bend NP, 13,14 Oct; Ufeus satyricus, Canadian, HEMPHILL Co, (STATE), 10 March.

ARKANSAS. Contributing: HAF(LP) & MS. HAF submitted a list of 19 Catocala sp. collected by LP. MS also reported on Catocala. No other reports.

NOTES: Interesting Catocala reported include the following; atocala, Paragould, GREENE Co, (STATE), 7-10 July (bait) (MS); flebilis, retracta, robinsoni, insolabilis, luctuosa, lacrymosa, epione, habilis, obscura, vidua, carissima, judith, innubens, palaeogama, nebulosa, neogama, ilia, ultronia, amica, Fayetteville, Washington Co (LP).

LOUISIANA. Contributing: VB and JRJ. VB reports that Catocala collecting has exceeded last year's record season, and what surely must be a record number of Catocala from a single trap; 743 specimens representing 22 species (4 State records), using a combined wattage of 2375 watts MV and 120 watts UV!

NOTES: GEOMETRIDAE - Lytrosis unitaria, L. sinuosa, L. heitzmanorum, Kisatchie Nat'l Forest, NATCHITOCHE Psh, May. NOCTUIDAE - Interesting Catocala collected include robinsoni, Abita Springs, ST. TAMMANY Psh, (STATE), 4 Oct; epione, andromedae, gracilis, connubialis, dejecta, mira, similis (STATE), muliercula, jair, louiseae (STATE), alabamae, judith (STATE), titania (STATE), messalina, orba, insolabilis, pretiosa, Kisatchie Nat'l Forest, 1 June (MV,UV) (all VB); C. cara carissima, Baton Rouge, East Baton Rouge Psh, 8 June (JRJ).



ZONE 7 ONTARIO/QUEBEC. Coordinator: Ross Layberry (RAL). Contributors: Gerry Clements (GC); Lars Crabo (LC); P.T. Dang (PD); G.J. van Dorsser (GD); Katharine Dunster; W.J.D. Eberlie (WE); Cliff Ferris (CF); Peter Hall (PH); Barry Harrison (BH); Quimby Hess (QH); Tom Toyomi Ikeda (TI); Ben & Brenda Kulon (BK); Don Lafontaine (DL); Ron Leuschner (RL); June Preston (JP); John Prideaux (JPX); Irene Trigg (IT); John P. Walas (JW).

ONTARIO. BUTTERFLIES: Thorybes pylades, 10 km N of New Liskeard, Temiskaming Dist., 18 June (QH). Erynnis horatius, Pinery Canoe Trail, Lambton Co, 31 May (BK). Erynnis baptisiae, Walpole Island, Lambton Co, 28 July (BK). Erynnis lucilius, Meyer Lake Rd., Algonquin Park, 23 July, FIRST FOR ALGONQUIN PARK (BK). Hylephila phyleus, Point Pelee, Essex Co, 14 September (GC). Poanes massasoit, 5 mi E of Grand Bend, Huron Co, 22 July (GC); Larose Forest, Russell Co, 18 and 20 July, COUNTY RECORD (RAL). Poanes viator, 4 miles SW of Arnprior, Renfrew Co, 10 July, COUNTY RECORD (RAL). Euphyes dion, Larose Forest, Russell Co, 18 and 20 July, COUNTY RECORD (RAL). Amblyscirtes vialis, Constance Bay Sandhills, Carleton Co, 17 May (PH). Euchloe olympia, The Burnt Lands, Lanark/Carleton Co Line, 26 May (CF); many first instar larvae on Arabis divaricarpa, Constance Bay Sandhills, Carleton Co, 26 May (RAL). Euchloe ausonides, 5 km N of Nipigon, Thunder Bay Distr., 17 June (TI). Satyrium edwardsii, High Park, Toronto, 29 June (JPX), 5 July (BH); Arner, Essex Co, 24 July (JPX); Oak Heights, Northumberland Co, 6 July (WE). Satyrium caryaevorum, Sylvan Park, Scarborough, York Co, 14 July (BH). Satyrium liparops, 2 larvae on Pin Cherry, 30 May, emerged 26,27 June, Cobourg, Northumberland Co (WE). Incisalia irus, Turkey Point, Norfolk Co, FIRST ONTARIO RECORD SINCE 1979 (DL). Incisalia eryphon, La Cloche Peninsular, Manitoulin Dist., 15 June (TI). Libytheana bachmanni, Walpole Island, Lambton Co, 5 July (BK). Charidryas nycteis, Constance Lake, Carleton Co, 11 July (first record from the site since 1977 when it was abundant) (PH). Charidryas harrisii, Richmond Fen, Carleton Co, 14 June (PH); Thunder Bay, Thunder Bay Distr., 18 June (IT), 24 June (JW); La Cloche Peninsular, Manitoulin Dist., many fresh males, 15 June (TI). Satyroides appalachia, Walpole Island, Lambton Co, 2 July (BK); Hawkesbury, Prescott Co, COUNTY RECORD, 9 July (RAL). Megisto cymela, nectaring on Partridgeberry, Mitchella repens, Heber Rogers Conservation Area, Peterborough Co, 25 June (GD). Cercyonis pegala, 11 km N of Matheson, Temiskaming Dist., 31 July, NORTHEAST RECORD FOR ONTARIO (QH). Oeneis jutta, Alfred Bog, Prescott Co, 27 May (LC).

NOTES: GEOMETRIDAE - Epitechia transcanada, E. columbiana, E. erpata, Nepean, Ottawa, 23 May (RL). Hydriomena excupata nanata, one, The Burnt Lands, Lanark/Carleton Co Line, 26 May (RL); first ONTARIO record, all previous eastern records subarctic. Aspitates conspersarius, one female (not positive of identification), The Burnt Lands, Lanark/Carleton Co Line, 26 May (RL); Also subarctic, first ONTARIO record if confirmed. Metarranthia obfirmaria, five, Constance Bay Sandhills, Carleton Co, 26 May (RL). Epitechia fletcherata, The Burnt Lands, 26 May (RL). ARCTIIDAE - Phragmatobia assimilans, 25 mi SW of Ottawa, 24 May (RL). NOCTUIDAE - Zale duplicata, Z. bethunei, Z. submediana, Nepean, Ottawa, 23 May (RL). Caradrina morpheus, Nepean, Ottawa, 10 specimens between 29 June and 14 July, first ONTARIO records (DL). Amyna octo, Rondeau Provincial Park, Kent Co, 2 specimens, 19, 20 September, third ONTARIO record (PD). Magusa orbifera, Nepean, Ottawa, plus Rondeau Provincial Park, Kent Co, and Caledonia, late July to late September, fourth ONTARIO record (DL). Don Lafontaine found it everywhere he ran a light trap in this period, including a major flight in September with up to 10 specimens per night.

QUEBEC. BUTTERFLIES: Almost all by RAL, except as noted, on a trip up the James Bay Highway [JBH], from Matagami (49°34' N, 77°42' W) at km 0 to Radisson (53°46' N, 77°35' W) at km 616, and the Caniapiscau Highway which runs east from km 545 to Lake Caniapiscau (54° N, 69°30' W). Erynnis icelus, km 59 and 89, James Bay Highway, 29 June. Hesperia comma, km 302 and 404, JBH, 4 July. Thymelicus lineola, Gran Remous, Gatineau Co, 5 July. Papilio glaucus canadensis, Louvicort, and Figuery, Abitibi Co, 28 June; km 89 and 129, JBH, 29 June; km 334, JBH, 4 July; km 111, Caniapiscau Highway, 1 July, Furthest NORTH Quebec record. Erora laeta, east of Low, Gatineau Co, 27 May (JP). Glaucopsyche lygdamus, Columbiere, Abitibi Co, 28 June; km 66, JBH, 29 June. Plebejus saepiolus, km 301 on Highway 58, La Verendrye Park, 28 June; km 66 and 89, JBH, 29 June. Agriades franklinii, km 302, JBH, 4 July, thriving colony on a small (400 x 100 yards) bare rocky outcrop, altitude 750 feet, many hundreds of miles south of treeline. Procllossiana eunomia, bog in Masham Twp., Gatineau Co, 21 June (PH); km 334 and 404, JBH, 4 July. Clossiana selene, km 89, JBH, 29 June; km 402, JBH, 4 July. Clossiana bellona/frigga, in grassy bogs at km 402 and 531, JBH, 30 June; all specimens appear intermediate between bellona and frigga; Don Lafontaine unable to say for sure which species they are. Both locations are far north of any Quebec records of bellona, far south of any of frigga. Phyciodes pascoensis, km 89 and 129, JBH, 29 June. Basilarchia arthemis, Columbiere, Abitibi Co, 28 June. Enodia anhedon, Bois Franc, Gatineau Co, 5 July. Oeneis chryxus calais, km 334, 402, 404, JBH, 30 June and 4 July. Oeneis jutta, in many grassy bogs between km 314 and 593, JBH, and km 25 and 111, Caniapiscau Highway, 30 June to 4 July.

NOTES: GEOMETRIDAE - Hydriomena excupata nanata, two, East of Low, Gatineau Co, 27 May; first SOUTHERN QUEBEC record (RL). Epitechia palpata, E. pygmaea obumbrata, E. erpata, E. fletcherata, E. columbiana, E. transcanada, Trois Rivières, 29 May (RL). NOTODONTIDAE - Gluphisia avimacula, Joliette, Joliette Co, 28 May (RL). NOCTUIDAE - Zale aeruginosa, Z. duplicata, Trois Rivières, 29 May (RL).



ZONE 8 MIDWEST: MISSOURI, KENTUCKY, WEST VIRGINIA, OHIO, INDIANA, ILLINOIS, IOWA, MINNESOTA, WISCONSIN, MICHIGAN.

Coordinator: Les A. Ferge (LF). Contributors: T. Allen (TA), V. Albu (VA), D. Bogar (DB), F. Bolin (FB), G. Balogh (GB), J. Bess (JB), R. Borth (RB), W. F. Babcock (WFB), C. Covell (CC), H. H. Chuah (HHC), J. V. Calhoun (JVC), T. W. Carr (TWC), D. Durkin (DD), D. Eiler (DE), H. T. Enterline (HTE), B. Gregg (BG), G. Gier (GG), M. Gilligan (JMG), L. D. Gibson (LDG), D. F. Hess (DFH), J. D. Hooper (JDH), R. Holister (RH), T. Herig (TH), D. C. Ifner (DCI), J. Jordison (JJ), C. J. Kudrna (CJK), L. C. Koehn (LCK), I. Leew (IL), V. P. Lucas (VPL), B. Monroe (BM), E. H. Metzler (EHM), G. Miller (GM), J. Mow (JM), J. T. McBurney (JTM), L. L. Martin (LLM), R. Mattingly (RM), J. C. Nekola (JCN), M. C. Nielsen (MN), D. K. Parshall (DKP), J. Perona (JP), J. C. Parkinson (JCP), J. W. Peacock (JWP), M. Plonczynski & D. Hilbebrandt (MWP), J. E. Riddlebarger (JER), R. Rahn (RR), R. F. Rockwell (RFR), R. W. Rings (RWR), D. F. Schweitzer (DFS), D. W. Schlicht (DWS), E. Shull (ES), J. A. Shuey (JAS), J. Scott (JS), Y. Sedman (YS), J. Tuttle (JT), J. A. Toot (JAT), D. J. Wright (DJW), J. Weber Jr. (JW), J. H. Wilterding (JHW), J. R. Wiker (JRW), W. Westrate (WW), R. A. Zebold (RAZ). GENERAL COMMENTS: An early onset of mild weather was reported in a number of areas in the zone, causing many spring species to appear over two weeks earlier than usual. A notable influx of southern migrants occurred, with *P. communis*, *A. campestris*, *P. sennae*, *H. isola*, *L. bachmanii*, *J. coenia* and *E. claudia* up in numbers or encountered significantly further north than usual. Some of these species were reported well into northern Michigan, Wisconsin and Minnesota. Migrant moths were also up, with *Erinnyis obscura* and *ello*, *Ascalapha odorata* and *Magusa orbifera* among the most interesting catches. The nomenclature and arrangement of this report follow the Hodges checklist. New county records are designated by capitalized county names, and new state records by capitalized species names plus the STATE notation.

MISSOURI. Only one report was received, that of a male *Speyeria diana* taken 27 June, Jackson Co, WEST, by Gary Gier.

KENTUCKY. Three reports were submitted. Covell, also reporting for others, sent detailed field records. The Geometrids *P. vernata* and *P. strigataria* were seen 19 January in Louisville; spring butterflies also emerged earlier than usual. *P. sennae* was observed in several counties. The season was ended 8 November with the onset of cool, wet weather.

BUTTERFLIES: *P. communis*, 18 Oct, Jefferson Co (CC); *P. protodice*, 21 June, Oldham Co (BG); *A. virginensis*, 7-13 April, Bullitt, JEFFERSON Cos (BM, CC, DD, GM, EHM); *A. midea*, 7-13 April, Bullitt, Hart, Jefferson, Meade Cos (BM, CC, DE, RM); *P. sennae*, 4 Aug, Fulton, Graves, Hickman, Hopkins, Marshall, Ohio Cos (CC); *E. nicippe*, 4 Aug, Fulton Co (CC); *S. edwardsii*, *caryaevorum*, 21 June, Oldham Co (CC); *I. henrici*, 7-12 April, Allen, Bullitt, Hart Cos (CC, DE, EHM); *C. ebenina*, 7-12 April, Bullitt Co (CC); *C. gemma*, 12 April, Bullitt Co (CC, EHM).

MOTHS: *ANISOTA PEIGLERI*, 18 Aug, Corbin, WHITLEY Co, STATE, ex 5th instar larva on *Quercus palustris* (JT).

WEST VIRGINIA. Allen sent a summary detailing the most interesting of the 172 new county records of butterflies added in 1986 (all TA).

BUTTERFLIES: *A. cellus*, 4 July, Boone Co; *A. lyciades*, 29 May, BERKELEY Co; *S. hayhurstii*, 31 July-4 Aug, Jefferson Co; *E. martialis*, 16 July, GREENBRIER Co; *E. lucilius*, 27 April-18 May and 31 July, GRANT, JEFFERSON Cos; *H. metea*, 27-28 April, GRANT Co; *A. hegon*, 26 April, JACKSON Co; *E. olympia*, 27 April, GRANT Co; *E. lisa*, 21-23 Aug, JACKSON, WOOD Cos; *F. tarquinius*, 29 June-4 Aug, HAMPSHIRE, HARDY, WOOD Cos; *H. titus*, 29-30 June, JACKSON, WOOD Cos; *P. m-album*, 25 June, 26 Aug, BERKELEY, MONONGALIA Cos; *E. laeta*, 9 July, MONROE Co; *G. lydamus*, 25-27 April, GRANT, JACKSON, MASON Cos; *C. borealis*, 16 July, GREENBRIER Co; *L. bachmanii*, 17 July, MONROE Co; *P. faunus*, 6 July, RANDOLPH Co; *P. progne*, 21 Aug, JACKSON Co; *NYMPHALIS VAU-ALBUM*, 23 Aug, 9 Oct, HAMPSHIRE, WOOD Cos, STATE; *J. coenia*, 4 July, BOONE Co; *S. diana*, 5 July, RALEIGH Co (abundant); *S. idalia*, 5-26 Aug, Monongalia Co; *A. clyton*, 10 June-12 Aug, BERKELEY, BRAXTON, HARDY, SUMMERS Cos; *S. appalachia*, 18-30 July, HARDY, WEBSTER Cos.

MOTHS: *Ascalapha odorata*, 10 Oct, HAMPSHIRE Co (TA).

OHIO. The Ohio Lepidopterists experienced an outstanding year for both butterfly and moth collecting, amassing a wealth of data for the Ohio Survey of Lepidoptera. Records from 29 contributors were compiled, resulting in a grand total of county records in excess of several hundred, with 13 new state moth records, plus a new U.S. record! Ifner and Lucas reported a very early spring (2-3 weeks advanced), with spring-emerging butterflies collected the last days of March. Most species appeared 1-2 weeks early through much of the season. *I. henrici*, *S. melinus*, *L. bachmanii* and *B. philinor* were much more common than in previous years, with irregular species *P. communis* and *P. protodice* locally abundant. *P. sennae* was seen several times, and a number of southern migrant moths were reported.

NEW U.S. RECORD (accidental introduction): *SPODOPTERA LITTORALIS*, SUMMIT Co, Oct 1985. Although previously intercepted at the U.S. border, this is the first time this Noctuid has been established in the U.S., being imported on geraniums from Israel to an Akron greenhouse. It was positively identified by the U.S. Dept. of Agriculture in January 1986, and is presumed to be eradicated (RWR).

BUTTERFLIES: *A. lyciades*, 4 June-18 July, ALLEN, COSHOCTON, HIGHLAND, KNOX Cos (DKP); *S. hayhurstii*, 26 July, PICKAWAY Co (JVC); *E. martialis*, 17 May, GALLIA Co (JVC); *E. baptisiae*, 19-24 April and 16 Aug-21 Sept, ATHENS, MEIGS, BELMONT, COSHOCTON, CRAWFORD, HOCKING, JEFFERSON, MONROE, SCIOTO, WASHINGTON Cos (JVC, DCI, RAW); *P. communis*, 5-19 Oct, BROWN, LAWRENCE Cos (JVC); *N. lherminier*, 1 June-17 Aug, BELMONT, FAIRFIELD, MONROE, PICKAWAY Cos (JVC, RAW); *H. leonardus*, 23-24 Aug, COSHOCTON, FULTON Cos (JVC, DCI); *H. metea*, 11 May, HIGHLAND, PIKE Cos (DCI, DKP); *H. sassacus*, 24 May, ATHENS, VINTON Cos (DKP); *P. massasoit*, 1-17 July, HENRY, MADISON, SHELBY Cos (DKP, JAS); *P. viator*, 14 July, KNOX Co (DKP); *E. dion*, 13-26 July, ALLEN, CRAWFORD, HARDIN, KNOX, SHELBY, VAN WERT Cos (DCI, DKP, JVC); *E. dukesi*, 14-26 July, CRAWFORD, HARDIN Cos (DKP, JVC); *E. bimacula*, 3 July, SHELBY Co (DKP); *A. hianna*, 17-24 May, HOCKING, PIKE, SCIOTO, VINTON Cos (DKP, JVC); *A. hegon*, 12-17 May, GALLIA, ROSS Cos (JVC); *P. protodice*, 8-21 Sept, ADAMS, GALLIA, MEIGS, SCIOTO Cos (JVC); *A. virginensis*, 19-26 April, MORROW Co (RFR); *E. lisa*, 17-31 Aug, CRAWFORD, TUSCARAWAS Cos (DCI); *Z. cesonia*, 9 Sept, LICKING Co (DKP); *S. caryaevorum*, 4 July, MADISON Co (DKP); *C. cecrops*, 18 May, PIKE Co (JVC); *I. augustus*, 3 May, JACKSON Co (JWP); *I. henrici*, 3-28 April, GREENE, HOCKING, JACKSON, MEIGS, MONROE, NOBLE, PERRY Cos (VA, JVC, DCI, DKP, JWP); *I. niphon*, 19 April, MEIGS Co (JVC); *E. ontario*, 20 June, CLARK Co (JAS); *P. m-album*, 24 April-13 June, PERRY, UNION Cos (JVC, DKP); *C. ebenina*, 13 April, ADAMS Co (JVC); *C. lydamus*, 4-19 April, GALLIA, JACKSON, PIKE Cos (JVC, DCI); *L. bachmanii*, 8 June-27 Sept, ASHLAND, BELMONT, COSHOCTON, CRAWFORD, GREEN, HARDIN, HENRY, KNOX, LOGAN, ROSS, SCIOTO, SHELBY, WOOD Cos (HHC, JVC, DCI, DKP, JER, JAS); *E. phaeton*, 29 June-21 July, COSHOCTON, GREENE, MORROW Cos (HHC, DKP); *P. progne*, 13-31 July, GAUGA, PUTNAM Cos (DCI, LCK, JAS); *N. vau-album*, 27 July, ASHTABULA Co (LCK); *S. eurydice*, 29 June, 23 July, ASHLAND, CRAWFORD, HENRY, SHELBY Cos (DKP, JAS); *S. appalachia*, 22 July, ASHLAND Co (DKP); *C. gemma*, 8 Sept, MEIGS Co (JVC).

MOTHS: *Sthenopis argenteomaculatus*, 4 June, PORTAGE Co (RWR); *CYDIA LACUSTRINA*, 27 April, HAMILTON Co, STATE (LDG, DJW); *Compacta capitalis*, 29 May, HAMILTON Co (LDG, DJW); *Glena cribrataria*, 16 Aug, Carroll Co (VFL); *Cabera erythemia*, 9 Aug, Portage Co (VFL); *C. quadrifasciata*, 14 June, Geauga Co (VFL); *Cepphis armitaria*, 14 June, Ashtabula Co (VFL); *Caripeta angustiorata*, 23 Aug, Scioto Co (VFL); *IDAEA SCINTILLULARIA* (det. C. Covell), 1 June, HAMILTON Co, STATE (LDG, DJW); *Lophosis laberculata*, 23 Aug, Scioto Co (VFL); *Tolyte laricis*, 18 Aug-1 Sept, ASHTABULA

Co (VEL); Sphinx chersis, 28 June, ASHTABULA Co (VEL); S. frankii, 26 June-1 July, ATHENS, HAMILTON Cos (HTE, LDG, DJR); S. gordius, 27 July, SANDUSKY Co (VEL); Erinmyia ello, 12 July, ASHTABULA Co (VEL); Darapsa versicolor, 28 June, ASHTABULA Co (VEL). Clostera strigosa, 26 April, PORTAGE Co (RWR); Bomolocha atmaria, 4 Sept, PORTAGE Co (LCK); PHYTOMETRA ERNESTINANA, 19 July, GEAUGA Co, STATE (VEL); Hypocala andremona, 14 Sept, FRANKLIN Co (FB); Ascalapha odorata, 21 July, Cuyahoga Co (CJW); Catocala dulcicola, 18 June, ATHENS Co (HTE); Diachrysia balluca, 9 Aug, PORTAGE Co (VEL); POLYCHRISIA MORIGERA, 29 May, HAMILTON Co, STATE (LDG, DJW); Autographa ampla, 11-28 June, ASHTABULA Co, 2nd STATE (VEL, JAT); SYNGRAPHIA EPIGAEA, 1 Sept, ASHTABULA Co, STATE (VEL); Tripudia quadrifera, 21 July, ERIE Co (EHM); HYPERSTROTTIA FLAVIGUTTATA, 18-19 July, ADAMS Co, STATE (EHM); TARACHIDIA BINOCULA, 18 July, ERIE Co, STATE (EHM); ACRONICTA TRITONA, 18 July, SCIOTO Co, STATE (JDH); Acronicta superans, 18 July, SCIOTO Co (JDH); APAMEA INDOCILIS, 19-28 June, GEAUGA Co, STATE (LCK); Apamea lutosa, 27 June, ERIE Co, 2nd STATE (EHM); Oligia obtusa, 16 Aug-18 Sept, GEAUGA, RICHLAND Cos, 2nd & 3rd STATE (LCK, RWR); Lemmeria digitalis, 4 Oct, PORTAGE Co (LCK, EHM); Spartinophaga includens, 5 July, MADISON Co (EHM); Hypocoena enervata, 21 July, Erie Co, 2nd STATE (EHM); Papaipema birdi, 6 Aug-23 Sept, PORTAGE, RICHLAND, TUSCARAWAS Cos (RWR); P. nepheleptina, 4 Oct, PORTAGE Co (LCK, EHM, DFS); PLATYSENTA MOBILIS, 22 Aug, SCIOTO Co, STATE (EHM); Stiria rugifrons, 31 Aug (larvae), ROSS Co (JDH); HOMOGLAEA HIRCINA, 22 March, LUCAS Co, STATE (TWC); Lithophane disposita, 25 March, RICHLAND Co, 3rd STATE (RWR); L. oriunda, 29 March, PORTAGE Co, 3rd STATE (RWR); Eupsilia devia, 29 March, ATHENS Co (HTE); Metaxaglaea semitaria, 4 Oct, PORTAGE Co, 2nd STATE (LCK, EHM, DFS); EPIGLAEA APIATA, 4 Oct, PORTAGE Co, STATE (EHM); Psaphida thaxteriana, 10 March, ATHENS Co (HTE); Homohadena badistriga, 2 July, PORTAGE Co (RWR); H. infixa, 1 June, HAMILTON Co (LDG, DJW); Sutyra profunda teltowa, 20 Sept, PORTAGE Co, 1st confirmed STATE (RWR); Polia nimbosea, 12 July, ASHTABULA Co, 2nd STATE (VEL); LACANOBI A LILACINA, 30 Aug, SCIOTO Co, STATE (EHM); Leucania linita, 5 July, MADISON Co (EHM); Egira dolosa, 14 April, PORTAGE Co, 3rd STATE (RWR); Metalepsis salicarium, 14 April, PORTAGE Co (RWR); Schinia gaurae, 30 Aug (larvae), Adams Co (LDG, JDH, EHM); S. nundina, 16 Aug, HARRISON Co (VEL).

INDIANA. Eiler and Shull submitted detailed reports. From 20 March to 11 November, Shull collected 66 species of butterflies and numerous moths. He reported many species of skippers absent, and found C. eurytheme and C. philodice in huge numbers in Kosciusko Co.

BUTTERFLIES: A. lycaides, 23 July, Brown Co (ES); E. lucilius, 17 July-2 Aug, Brown, Kosciusko Cos (ES); P. communis, 25 Sept, Wabash Co (DE); N. lherminier, 17 July, Brown Co (ES); H. phyleus, 11 Aug, Marion Co (ES); H. leonardus, 14 Sept, WHITLEY Co (DE); P. origenes, 21 July, Brown Co (DE); P. massasoit, 10 July-3 Aug, Kosciusko, La Grange Cos (DE, ES); P. zabulon, 21 July-14 Sept, Brown, WABASH, WHITLEY Cos (DE); E. conspicua, 10-16 July, NOBLE, Kosciusko Cos (DE); P. protodice, 23 June, Brown Co (ES); A. napi, 18 June and 13 July-25 Aug, Kosciusko, La Grange Cos (DE, ES); ARTOGEIA VIRGINIENSIS, 1 April, CLARK Co, STATE and range extension (DE); E. dorcas, 16 July, La Grange, NOBLE Cos (DE); S. liparops strigosum, 18 June, La Grange Co (ES); S. melinus, 23 June, Brown Co (ES); L. bachmanii, 21 June-20 Sept, Brown, Kosciusko Cos (DE, ES); P. comma, 23 March-31 May, CLARK, Wabash Cos (DE); J. coenia, 23 July-14 Sept, Brown, Wabash, Whitley Cos (DE, ES); S. idalia, 3 Aug, Kosciusko Co (rare in recent years, ES); E. anhedon, 14 Sept, WHITLEY Co (DE); S. eurydice and appalachia leewui, 16 July, NOBLE Co (DE).

MOths: Glena cribrataria, 24 July, Brown Co (DE, ES); Plagodis kuetzingi, 24 July, Brown Co (DE); Citheronia regalis, 21-23 July, Brown Co (ES); Hemileuca species, larva with broad white lateral band photographed in Kosciusko Co fen, 10 July (DE); Dasylophia thyatiroides, 22 July, Brown Co (DE); Ledaea perditalis, 23 July, Brown Co (DE); Hypsoropha hormos, 21-23 July, Brown Co (ES); Catocala lacrymosa, 11 July, C. vidua and C. marmorata, 8 July, and C. connubialis, 17 June-11 July, all Wabash Co (ES).

ILLINOIS. Hess and Sedman reported an unusually hot, early spring, with the season advanced several weeks. P. polyxenes was collected on 27 March! The remainder of the season was variable, with a hot July, an unusually cool late summer, and mixed cool and warm rainy spells in fall. Most resident butterflies were up in numbers. Migrant species also had a good year, with P. sennae the most abundant since 1975. Wiker also experienced an early spring, with nine butterfly species (including D. plexippus) collected by 31 March, and he found P. sennae common in August and September. Leeuw provided a brief report for McHenry and Lake Counties.

BUTTERFLIES: E. martialis, 2 Aug, Macoupin Co (JRW); E. baptisiae, 16 July, McDonough Co (DFS); H. phyleus, 2 Sept-5 Oct, McDonough, MENARD Cos (DFS, JRW); H. ottoe, mid to late June, Mason Co (JRW); H. leonardus pawnee, 12 Sept, McDonough Co (DFH); H. metea, 29 April, Pope Co (JRW); A. campestris, 3 Sept-5 Oct, McDonough Co (DFH); A. hianna, 27 April-early May, Mason, Scott Cos (JRW); Z. cesonia, 1 Sept, Pike Co (DFH); P. sennae, 29 April, Pope Co, early (JRW), & 24 July-31 Oct, Brown, Fulton, Mason, McDonough, Menard Cos (DFH, YS, JRW); E. nicippe, 1 Sept, Pike Co (DFH); N. iole, 23 Aug-27 Sept, Cass, Henderson, Mason, Pike Cos (DFH); G. xanthoides dione, 13-19 June, Cass, McDonough Cos, abundant (DFH); I. nippon, 5 April, MASON Co (MWP), & 29 April, Pope Co (JRW); P. m-album, 5-9 Sept, MENARD Co (JRW); S. melinus, 16 Aug-5 Oct, Mason, McDonough, Pike Cos (DFW, YS); L. marina, 13-17 Aug, JACKSON, RANDOLPH Cos (T. Wiley); C. ebenina, 13 April, ADAMS Co (JRW); P. progne, 16-20 Sept, Peoria Co (DFH), & McHENRY Co, ex larvae on Ribes hirtellum (IL); J. coenia, 28 Sept, Lake Co (IL); S. idalia, 16 June-23 Aug, Cass, Mason Cos (DFH); C. bellona, 15 Jun-28 Sept, McDonough, HENDERSON, PEORIA Cos (DFH); C. gorgone carlota, 16 Jun-23 Aug, Mason Co (DFH).

MOths: Synanthedon rileyana, 26 July, McHenry Co (IL); Melittea cucurbitae, 28 June-17 July, McHenry Co (IL); Carmenta anthracipennis, 9-16 Aug, Lake, McHenry Cos (IL); Erinmyia ello, 4 Oct, Crawford Co (Susan D. Holmes via JRW); Diachrysia balluca, 21 Aug, Hancock Co (YS); Eosphropteryx thyatiroides, 19 June, McDonough Co (YS); Magusa orbifera, 18 Sept-9 Oct, McDonough Co (YS); Schinia gloriosa, 22 July, McHenry Co (IL).

IOWA. Four reports were received. A detailed summary of butterfly records was sent by D. Schlicht, who has initiated a systematic inventory of Lepidoptera from the important remaining native plant communities in northern Iowa, with the assistance of plant ecologist, turned Lepidopterist, Jeff Nekola. They added 130 new county records this season. Weber sent a brief report of butterflies. Mow, reporting on the moths, found the early-season Catocala plentiful, but late-season species scarce. Jordison submitted records of Catocala from Pottawattamie County.

BUTTERFLIES: E. brizo, CLAYTON Co (DWS); ERYNNIS LUCILIUS, 9 May-22 July, CLAYTON Co, STATE (DWS, JCN); E. baptisiae, 21 June, POCAHONTAS Co (DWS); P. communis, 18 July, Fremont Co (JW); O. powesheik, 21 June-9 July, CERRO GORDO, Dickinson, Emmet, HANCOCK, Howard Cos (JCN); H. ottoe, 24 June, ALLAMAKEE Co (DWS); P. origenes, 23 June-22 July, CLINTON, DELAWARE, EMMET, FAYETTE, O'BRIEN Cos (JCN, DWS); A. arogos iowa, 7-9 July, CLAY, HANCOCK, KOSSUTH Cos (JCN, DWS); P. byssus, 21 June-11 July, CLINTON, Linn Cos (JCN, DWS); P. massasoit, 9 July, Dickinson Co (JCN); P. viator, 4-8 July, CERRO GORDO, Clay, Dickinson Cos (JCN, DWS); E. dion, 18 July, CLINTON Co (JCN); E. conspicua, 9-26 July, CERRO GORDO, DICKINSON, FAYETTE Cos (JCN, DWS); E. bimaculata, 24 June-15 July, BUCHANAN, FAYETTE Cos (JCN); S. acadica, 24 June-9 July, CHICKASAW, FLOYD, HANCOCK Cos (JCN, M. Schlicht); H. isola, 21 June-18 July, CHEROKEE, CLAY, Fremont, O'BRIEN, POCAHONTAS Cos (JCN, DWS, JW); L. melissa melissa, 21 June, Dickinson Co (JCN); L. bachmanii, 22 July-7 Aug, CLAYTON, MITCHELL Cos (DWS); S. idalia, 26 June-21 Aug, CLAY, HOWARD Cos (JCN, DWS); C. gorgone, 23 April, Linn Co, early (JCN); E. phaeton, 20-25 June, ALLAMAKEE, Linn, MITCHELL Cos (JCN); J. coenia, 21 June-7 July, KOSSUTH,

CHEROKEE, DICKINSON Cos (JCN); S. eurydice fumosa, 21 June-22 Aug, CLAYTON, CLINTON, DELAWARE, FAYETTE, KOSSUTH, MITCHELL Cos (JCN, DWS).

MOTHS: Sphingicampa bicolor, 12 July, Hardin Co (JM); Ceratonia catalpae, 13 July, Hardin Co (JM); Pachysphinx modesta, 20 July, Franklin Co (JM); Sphinx kalmiae, 29 July, Hardin Co, larvae on Privet (JM); Manduca sexta, 4 Oct, Hardin Co (JM); Catocala innubens, 4-22 July, Hardin, Pottawattamie Cos (JJ, JM); C. piatrix, 24-29 July, Hardin, Pottawattamie Cos (JJ, JM); C. serena, 13 July, Hardin Co (JM); C. judith, 1 Aug, FRANKLIN Co (JM); C. angusi, 16 Aug, HARDIN Co (JM); C. lacrymosa, 8-30 July, HARDIN, Pottawattamie Cos (JJ, JM); C. meskei, 10 July, Pottawattamie Co (JJ); C. junctura, 14 July, Pottawattamie Co (JJ); C. cara, 10 July, Pottawattamie Co, early (JJ) & 3 Aug, Hardin Co (JM); C. amatrix, 18 July, Pottawattamie Co, early (JJ) & 1 Aug, Hardin (JM); C. abbreviatella, 20 June, Pottawattamie Co (JJ).

MINNESOTA. Three reports were received. Scott sent lists of butterflies found in seven counties, McBurney reported briefly for Waseca County, and Weber reported mostly for Hubbard County. A number of southern migrant butterflies were found, with A. campestris, and E. claudia, the most widespread.

BUTTERFLIES: P. communis, 12 July-23 Aug, Remville, Waseca Cos (JTM, JS); O. powesheik, 4 July, Lincoln Co (JW); H. ottoe, 11-12 July, Pipestone Co (JS); H. dacotae, 4 July, Lincoln Co (JW); A. campestris, 12 June-23 Aug, Freeborn, Hubbard, Pipestone, Remville, Waseca Cos (JTM, JS, JW); A. arogos, 11-12 July, Lincoln, Pipestone Cos (JS); P. viator, 12-19 June, Freeborn Co (JS); E. farquinius, 9 July, Clearwater Co (JW); C. xanthoides dione, 12-14 July, Remville Co (JS); H. isola, 11-17 July, Pipestone, Remville, Rock Cos (JS, JW); L. bachmanii, 16-23 Aug, Waseca Co (JTM); J. coenia, 12 July-23 Aug, Hubbard, Remville, Waseca Cos (JTM, JS, JW); E. claudia, 12 June-14 July, Freeborn, Hubbard, Lincoln, Pipestone, Remville Cos (JS, JW), ovipositing on Viola (JS); S. idalia, 11 July, Lincoln Co (JS); S. eurydice fumosa, 12-29 June, Freeborn Co (JS).

WISCONSIN. Six reports were received. Ferge noted a sudden onset of mild conditions in March, which caused several species of spring-emerging Noctuids to appear by the month's end, unusually early. Emergences of Catocala were also advanced, with a record 12 species seen before the end of June. Cool or rainy conditions prevailed after early August, hampering collecting efforts. Parkinson sent data on butterflies and moths from many counties, giving the state good coverage. He and Ferge reported finding a number of southern migrants. Balogh summarized collecting trips to Grant and Vilas Counties. Wilterding, reporting for Door County, felt it was a poor year overall, finding Hesperidae, Nymphalidae and Noctuidae down from last year.

BUTTERFLIES: T. lineola, 28 June, GREEN Co (JCP); H. ottoe, P. origenes, 28 June, Grant, Green Cos (JCP); E. dion, 20 July, DOOR Co (JHW); E. conspicua, 13 July, RICHLAND Co (JCP); A. hegon, 6 June, Marathon Co (JCP); P. crespontes, 13-31 July, Green, Richland Cos (IL, JCP); E. lisa, 13 July, DODGE Co (LF); C. xanthoides dione, 28 June, Grant Co (JCP); I. irus, 9 May, Adams Co (JCP); S. melinus, 9 May-13 July, ADAMS, Grant Cos (JCP); L. melissa samuelis, 14 July-1 Aug, Adams, Burnett, Wood Cos (LF, JCP); P. saepiolus, 13 June, Lincoln Co (RR); L. bachmanii, 10 May-28 June, Grant, Rock Cos (LF, JCP); E. claudia, 28 June-17 Aug, Grant, Green, Lincoln, Marathon, Oneida, TREMPLEAU Cos (JCP, LF); S. idalia, 28 June-28 Aug, Green Co (IL, JCP); N. vau-album, 13 July, CRAWFORD Co (JCP); J. coenia, 17 Aug, TREMPLEAU Co (JCP).

MOTHS: Atteva punctella, 30 July-4 Aug, Door Co (JHW); Carmena anthracipennis, 10 Aug, Green Co (IL); Acossus centerensis, 6 July, Door Co (JHW); Itame andersoni, 3 July, Vilas Co (GB); I. abrupta, 28-30 June, Grant Co (GB); Euchlaena milnei, 28-30 June, Grant Co (GB); Sphingicampa bicolor, 13 July-8 Aug, CRAWFORD, Grant Cos (JCP); Sphinx canadensis, 1-13 July, CRAWFORD, Marathon Cos (JCP); Notodonta scitipennis, Schizura concinna, 3 July, Oneida Co (LF); APANTESIS CARLOTTA, 18 July-19 Sept, GRANT Co, STATE (LF, JCP); Idia majoralis, 29 June-16 July, Grant, Sauk Cos (GB, LF); I. denticulalis, 8 July, Sauk Co (LF); METALECTRA DISCALIS, 28 June-19 July, GRANT, SAUK Cos, STATE (GB, LF, JCP); Cissusa spadix, 25 April, TREMPLEAU Co (LF); Ascalapha odorata, 9 Aug, GRANT Co (JCP); Catocala innubens, 28 June-13 July, CRAWFORD, Grant, RICHLAND Cos (GB, RB, LF, JCP); C. obscura, 9 Aug, Grant Co (JCP); C. subnata, 13 July-17 Aug, Grant, RICHLAND, TREMPLEAU Cos (JCP); C. briseis, 4-10 Aug, Door Co (JHW); C. meskei, 28 June-19 July, Dane, Grant, Sauk Cos (GB, RB, LF); C. illecta, 13 July, CRAWFORD Co (JCP); C. abbreviatella, 27 June-8 July, Grant, Sauk Cos (GB, LF, JCP); C. nuptialis, 17 Aug, Trempealeau Co (JCP); C. amestris, 28 June-16 July, Grant, Sauk Cos, more common than usual (GB, RB, LF, JCP); C. clintoni, 28-29 June, Grant Co (GB, JCP); C. minuta, 28 June, Grant Co (GB, JCP); C. connubialis, 29 June, GRANT Co, 2nd STATE (GB); Chrysanympha formosa, 14 July, Door Co (JHW); Autographa mappa, 3 July, VILAS Co (GB); Thioptera nigrofimbria, 25 Sept, DANE Co (LF); AMYNA OCTO, 19 Sept, GRANT Co, STATE (LF); Tarachidia binocula, 1 Aug, BURNETT Co (LF); Colocasia flavicornis, 29 June, Door Co (JHW); Acronicta betulae, 30 May-19 July, Dane, Sauk Cos (LF); Crymodes relicina, 19 Sept, Grant Co (LF); Oligia chlorostigma, 29 June, Grant Co (GB); Oligia bridghami, 2-7 Aug, Door Co (JHW); Papaipema cerina, 6 Sept, RICHLAND Co (LF); Conservula anodonta, 22 July, Door Co (JHW); Enargia mephisto, 14 June-5 July, Dane, Oneida, Vilas Cos (LF, JCP); Magusa orbifera, 15 Aug-11 Oct, Dane, Grant Cos (LF), reared from larvae stripping Buckthorn trees in a Jefferson Co nursery (L. Lovett, P. Pellitteri); STIRIODES OBUSA, 12 July, GRANT Co, STATE (JCP); Psaphida thaxteriana, 29 March, IOWA Co (LF, JCP); Heliothis borealis, 9 May, Adams Co (JCP).

MICHIGAN. Nielsen reported frustrating abnormal weather patterns, with the mildest March since 1977 and excessive rain in June and September. However, record drought occurred in May-June in the western U.P. Spring species appeared earlier than usual, with 22 butterfly species taken 10-11 May in Montcalm Co. Despite the weather, 98 butterfly species were recorded. Catocala were up from last year, with 32 species. Moths, especially Papaipema, were more numerous in September. A number of southern strays were reported. IRNP = Isle Royale National Park.

BUTTERFLIES: P. centaureae, 10 May, Montcalm Co (JB) & larvae on Fragaria virginiana, 14 Aug, Otsego Co (JB, MN); O. powesheik, 14 July, Jackson Co (DB); P. crespontes, 11 May, Montcalm Co, early (MN); E. ausonides, 17 June, IRNP, Keweenaw Co, adults ovipositing and larvae found on Arabis drummandi (TH, MN); A. virginianensis, 26 April, MONTCALM Co (MN); I. irus, 26 April-10 May, Montcalm Co (MN); E. amyntula, 18 June, IRNP, Keweenaw Co (TH, MN); L. idas nabokovi, 14-22 June, Alger Co, and IRNP, Keweenaw Co (TH, MN); L. melissa samuelis, 31 May, 13 July, Allegan, Montcalm Cos (MN); J. coenia, 3-29 July, Houghton, Kalamazoo, Keweenaw Cos (DE, JP); E. claudia, 6 July-28 Aug, Dickinson, Keweenaw Cos (JP); P. eunomia dawsoni, 14-15 June, Keweenaw, Mackinac Cos (MN); C. frigga ssp., 15 June, Keweenaw Co, ovipositing on Andromeda glaucophylla (TH); N. mitchellii, 10-14 July, Cass, Jackson Cos (DB); C. inornata, 1 Aug, Mackinac Co, 1st record of second brood (RH); O. macounii, 16-20 June, IRNP, Keweenaw Co (TH, MN); O. chryxus strigulosa, 10 May, Montcalm Co (JB, TH, MN).

MOTHS: Synclita tinealis, 18 July-22 Aug, Allegan, Cass, St. Joseph Cos (GB); Itame evagaria, 30 May-1 June, Allegan, Montcalm Cos (GB); Mellilla xanthometata, 22 Aug, Allegan Co (GB); Econista dislocaria, 18 July, St. Joseph Co, 2nd STATE (GB); CABERA QUADRIFASCIARIA, 29 May, KALAMAZOO Co, STATE (GB); Metarranthis obfirmaria, 10 May, Allegan Co (GB); IDAEA EREMIATA, 30 May, ALLEGAN Co, STATE (GB); CYCLOPHORA NANARIA, 3 Oct, CASS Co, STATE (GB); SCOPULA QUADRILINEATA, 30 May-14 June, ALLEGAN Co, STATE (GB); Hydrelia albifera, 12 Aug, Barry Co (GB); EUPITHECIA BOWMANI,

27 April, KALAMAZOO Co, STATE (GB); E. ravocostaliata, 27 April, Kalamazoo Co (GB); Hyalophora columbia, 22 June, BARAGA Co, attracted to female cecropia (TH, MN); Ceratonia hageni, 18-19 Sept, Cass Co (MN); ERINNYIS OBSCURA, 3 Oct, CASS Co, STATE (MN); Notodonta scitipennis, 30 May-1 June, Allegan Co (GB); Epantheria scribonia, 3 Oct, Cass Co, LATE (MN); Idia denticulalis, 18 July, St. Joseph Co (GB); Catocala insolabilis, 18 July, St. Joseph Co (GB); C. dulciola, 12 July, CASS Co (MN); Autographa mappa, 18 June, IRNP, KEWEENAW Co (MN); Spraguei leo, 18 July, St. Joseph Co (GB); Amyna octo, 18 Sept-3 Oct, Cass Co (MN); Oligia bridghami, O. miniscula, 15 Aug, Chippewa Co (MN); Meropleon ambifusca, 18 Sept, CASS Co, 2nd STATE (MN); Parapamea buffaloensis, 19-20 Sept, Berrien, Cass Cos (MN); Papaipema cerina, 18 Sept-4 Oct, Cass Co (GB, MN, WW); P. speciosissima, 25 Sept, Clinton Co (MN); P. appassionata, 15 Aug, Chippewa Co (MN), 9 Sept, BARRY Co, SOUTH (GB); P. nepheleptena, 27 Sept, LENAWEE Co (MN); Fagitana littera, 10 May, Kalamazoo Co (GB); Magusa orbifera, 9-28 Sept, Barry, BERRIEN, Cass Cos (GB, MN); Brachionycha borealis, 18-19 April, Otsego Co (MN); Adita chionanthi, 25 Sept, CLINTON Co (MN); Schinia indiana, 1 June, Montcalm Co, one specimen found on Phlox pilosa as a result of seven hours searching! (GB).



ZONE 9 SOUTHEAST: ALABAMA, FLORIDA, GEORGIA, MISSISSIPPI, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE, VIRGINIA, BERMDA. Coordinator: Andrew F. Beck (AFB). Contributors: Lee Adair (WLA), Dave Baggett (HDB), Richard Boscoe (RB), Terry Dickel (TSD), Woody Dow (LD), Rich Gillmore (RG), William Hark (WTH), Frank Hedges (FH), Jack Heinrich (JH), John Hyatt (JHY), Jack Jones (JRJ), Marc Kutash (MK), Debbie Matthews (DM), Paul Miller (PM), Harry Pavulaan (HP), Jeff Sloten (JRS), Richard Smith (RHS), Steve Spomer (SS), Charlie Stevens (CS), Paul Thompson (PT), Jim Tuttle (JT), Charlie Watson (CW). Some determinations were made by M.S. Adams (MSA), D.R. Davis (DRD), D.C. Ferguson (DCF), J.G. Franclemont (JGF), and H.H. Neunzig (HHN), to whom we extend our thanks. Special thanks and good wishes also to Bryant Mather. This was apparently a good collecting year in the southeast. Significant records were submitted from all states except Georgia. There were also no records from Bermuda. The Southern Lepidopterists Society held its annual field meeting at Torreya State Park, Florida and set out with the intention of establishing state and county records in the little-collected Florida panhandle; as the summary shows, they were successful. Attribution of these records was handled via HDB and JRS. As is customary, I have edited the submissions made by contributors. Records of common species in the core of their known range are the first to be deleted for space reasons, but all contributions are recorded and forwarded for revision of the county atlas. As of the 1986 season, all contributions are computerized and available to anyone on request.

ALABAMA. BUTTERFLIES: L. bachmanii, Huntsville, Madison Co, 22 Jul, abundant (WTH). E. claudia, Huntsville, Madison Co, 22 Jul (WTH).

FLORIDA. BUTTERFLIES: A. lyciades, Suwannee R St Pk, SUWANNEE Co, 21-23 May (HDB); A. numitor, vic. Rollins Corner, CALHOUN Co, 27 Sep (LD via HDB); H. attalus glossonae, Ocala Nat For, PUTNAM Co, 12 Oct (JRS via HDB); H. meskei straton, 7.2 Km W of Lake Placid, HIGHLANDS Co, 5 Oct (HDB) & Suwannee R St Pk, SUWANNEE Co, 31 May (JRS via HDB); P. origenes, 2.5 Km E of West Bay, BAY Co, 27 Sep (HDB); A. a. arogos, Ocala Nat For, PUTNAM Co, 18 Oct (JRS via HDB); P. viator zizaniae, Torreya St Pk, LIBERTY Co, 28 Sep (HDB); E. arpa, 2.5 Km E of West Bay, BAY Co, 27 Sep (LD via HDB) & Chipola Exp Sta, CALHOUN Co, 27 Sep (HDB); E. pilatka, Hwy 98, JEFFERSON Co, 26 Sep (JHY via HDB); E. alabamiae, Hwy 98, WAKULLA Co, 27 Sep (JHY via HDB); E. ontario, Suwannee R St Pk, SUWANNEE Co, 21-23 May (HDB); C. virginianensis, 2.5 Km E of West Bay, BAY Co, 27 Sep (PM via HDB), and Ft. Gadsden, FRANKLIN Co, 27 Sep (JH via HDB); S. stelenes, Jones Scenic Dr, COLLIER Co, 4 Nov, NORTH (MK via HDB); A. texana seminole, Ft. Gadsden, FRANKLIN Co, 27 Sep (FH via HDB) & Aspalaga Landing, GADSDEN Co, 27 Sep (JH via HDB) and Florida Caverns St Pk, JACKSON Co, 27 Sep (CS via HDB) & Hwy 98, WAKULLA Co, 27 Sep (JHY via HDB); B. archippus watsoni, Rollins Corner, CALHOUN Co, 27 Sep (LD via HDB); E. monima, Dade Co, May, reared on Bursera simaruba (Gumbo-limbo) (RB via HDB) and LaBelle, HENDRY Co, 19 Jun, NORTH (JH via HDB); E. portlandia, Calhoun Bridge, Liberty Co, 26-28 Sep, taken at blacklight (HDB); C. gemma, Ft. Gadsden, FRANKLIN Co, 27 Sep (JRS); N. areolata, Ft. Gadsden, FRANKLIN Co, 27 Sep (DM via HDB) and Hwy 375, WAKULLA Co, 27 Sep (GW via HDB).

MOTHS: The following U.S. records were reported from south Florida. **TORTRICIDAE - Cryptaspasma lugubris**, Fuchs Hammock, DADE Co, 10 Feb 1985, det. DRD, STATE, UNITED STATES. **PYRALIDAE - Lipographis subosseola**, Upper Key Largo, MONROE Co, 30 Dec 1981, det. HHN, STATE, UNITED STATES; **Scorylus cubensis**, Long Key, MONROE Co, 27 Oct 1984, det. HHN, STATE, UNITED STATES. **NOCTUIDAE - Dipterygia punctirena**, Upper Key Largo, MONROE Co, 15 Mar 1985, det. JGF, STATE, UNITED STATES; **Platysenta punctifera**, Fuchs Hammock (abundant) DADE Co, 11 May 1978, det. MSA, STATE, UNITED STATES; **Epidroma pannosa**, No Name Key, MONROE Co, 2 Apr 1983, det. MSA, STATE, UNITED STATES; **Elousa albicans**, No Name Key, MONROE Co, 1 Apr 1984, det. MSA, STATE, UNITED STATES; **Bema neuricella**, Long Key, MONROE Co, 24 Feb 1984, det. HHN, STATE, UNITED STATES (all TSD). Other Florida records of interest were the following. **PYRALIDAE - Blepharomastix differentialis**, Fuchs Hammock, Dade Co, 30 Dec 1985, reared on Blechnum brownii (Acanthaceae) HOST; Salobrena rubriginea, Long Key, MONROE Co, 18 Jan 1985, det. DCF, STATE (?) (both TSD). **SPHINGIDAE - M. jasminearum**, McKeathan Lk St Rec Area, HERNANDO Co, 15 Jun (MK); D. versicolor, Torreya St Pk, LIBERTY Co, 3 Jul (WLA via HDB). **NOCTUIDAE - Antiblemma filaria**, Long Key, Monroe Co, 16 Mar, ex ova on Eugenia foetida & E. axillaris (Myrtaceae) HOST (TSD); A. odorata, Torreya St Pk, LIBERTY Co, 3 Jul, at bait, (HDB); Catocala piatrix, Suwannee R St Pk, Suwannee Co, 10 May, ex larva on Carya sp., adult em. 12 Jun, (JRS); C. gracilis & C. coccinata, Myakka Lk St Pk, both SARASOTA Co, 2-3 May, the latter SOUTH (HDB & WLA); C. orba, Suwannee R St Pk, SUWANNEE Co, 22 May, at bait (HDB); C. minuta, Myakka St Pk, SARASOTA Co, 2-3 May, SOUTH (HDB & WLA); Ophiuche vetustalis, Fuchs Hammock, Dade Co, 10 Oct 1978, det. MSA; Amphipyra pyramidoides, Suwannee R St Pk, SUWANNEE Co, 2 Jul, at bait (WLA via HDB); Bleptina (=Nodaria) araelis, Upper Key Largo, Monroe Co, 8 Nov, det. MSA (TSD); S. jaguarina, Suwannee R St Pk, SUWANNEE Co, May, Jun, assoc. with Baptisia sp. (HDB); S. lucens, McKeathan Lk St Rec Area, HERNANDO Co, 9 Nov, LATE (RG via HDB).

MISSISSIPPI. BUTTERFLIES: L. accius, Moss, Jasper Co, 24 Jun 1984; H. phyleus, Moss, Jasper Co, 24 June 1984 & Laurel, Jones Co, 22-23 Jun 1984; P. vibex, E. ruricola, Laurel, Jones Co, 22-23 June 1984 (all SS); L. a. astyanax, A. andria, Laurel, Jones Co, 18-21 June 1977 (both SS); E. sosybius, Moss, Jasper Co, 24 June 1984 & Laurel, Jones Co, 22-23 June 1984; N. areolata, Moss, Jasper Co, 24 June 1984 (all SS).

MOTHS: NOCTUIDAE - C. ilia conspicua, vic. Ridgeland, Madison Co, 13 Jun (JRJ).

NORTH CAROLINA. BUTTERFLIES: B. bellona, vic. Blantyre, TRANSYLVANIA Co, 30 Aug 1985 (PT); B. archippus floridensis, Buxton, Dare Co, 12 Sep (HP); D. g. berenice, Cape Hatteras, Buxton, & elsewhere, Dare Co, 11-12 Sep, common at Cape Hatteras, uncommon elsewhere (HP).

SOUTH CAROLINA. BUTTERFLIES: M. gryneus smilacis, Hunting Isl., BEAUFORT Co, 26 Mar; I. henrici ssp., Hunting Isl., BEAUFORT Co, 26 Mar; B. pseudofea, Hunting Isl., Beaufort Co, 26 Mar, EARLY; C. ladon f. violaceae, Edisto Bch.,

COLLETON Co, 26 Mar (all HP).

TENNESSEE. MOTHS: NOCTUIDAE - *Anisota peigleri*, I-40 Welcome Center, Jefferson Co, 18 Aug, STATE, larvae on *Quercus palustris* (JT).

VIRGINIA. BUTTERFLIES: *P. protodice*, roadsides, Orange Co, 18 Aug, dominant white in field (WTH). *H. hyllus*, 1.8 Km W of Silva, ACCOMACK Co, 1 Sep, STATE (RHS).



ZONE 10 NORTHEAST: LABRADOR, NEWFOUNDLAND, MARITIMES, NEW ENGLAND, NEW YORK, PENNSYLVANIA, NEW JERSEY, MARYLAND, DELAWARE, DISTRICT of COLUMBIA. Coordinator: Dave Winter (DW). Contributors: John Albright (JA), via DS & AEB; A. E. Brower (AEB); Charles Bier (CB), via DS; William Boscoe (WB); Lars Crabo (LC); W. J. Cromartie (WC), via DS; W. J. D. Eberle (WE); John H. Fales (JHF); Jeffrey T. Frey (JTF); L. Paul Grey (LPG); John Glaser (JG), via PK; Stephan Goldstein (SG); W. R. Grooms (WG), via JHF; Henry Hensel (HH), via LPG; Jeff Ingraham (JI); Philip Kean (PK); Ross Layberry (RL); Mark Mello (MM); Patricia Mehlhop-Cifelli (PM), via DS; Robert May (RM); Austin Platt (AP), via JHF; Harry Pavulaan (HP), via PK; C. Raithel (CR), via DS; Frank Rutkowski (FR); Alfred Spoo (AS); Beth Swartz (BS), via DS; Calvin Schildknecht (CS); Dale Schweitzer (DS); Richard H. Smith (RS); T. Smith (TS), via DS; Don Tangren (DT); Ed Thompson (ET), via RS; A. Wilkinson (AW), via DS; Elton Woodbury (EW), via RS; Richard Waldrep (RW), via PK & RS. (ALL DS and associated contributions are courtesy of The Nature Conservancy and affiliated state Natural Heritage programs). [Note corrections to last year's report, NEWS, p. 57, Jul/Aug 1986.] Records are indicated by capitalization.

GENERAL: CS in Gettysburg, PA, and JI in New York City remarked on the unusually large numbers of *E. philenor* seen in 1986. DW noted in Dedham, Norfolk Co, MA, from mid-July on, and in Islesboro, Waldo Co, ME, the latter half of August, large numbers of ichneumon wasps of six species, often exceeding the number of moths in the MV light trap, possibly predicting further reduction in lep populations for next season.

MIGRATORY SPECIES: *L. accius*, Howard Co, 31 Aug (RS), repeatedly in Calvert Co, 14 Aug to LATE on 9 Nov (JHF), & in late Oct, Montgomery Co (WG); *P. ocola*, Crownsville, Anne Arundel Co, 5 Oct (PK); *P. protodice*, at several Montgomery Co sites, 6 June and 27 Sept to 29 Oct (HP, PK), and to 9 Nov (WG); *Abaeis nicippe*, Conowingo, Cecil Co, 23 Aug (PK), & Calvert Co, 25 Aug (JHF), and Seneca, Montgomery Co, 27 Sept (HP); *V. cardui*, Seneca, 19 Oct (PK), all in Maryland. First spring *D. plexippus* seen in Calvert Co was 1 May (right on the midpoint of 48 years of records by JHF), in Allegany & Baltimore Cos, MD, 17 May (PK), and in Gettysburg, PA, 22 May (CS). First fresh specimen, Calvert Co, 4 June (JHF). Thousands seen nectaring on tick-seed sunflower, early Sept, Anne Arundel and Cecil Co, MD (PK). Main southward flights in Calvert Co were 13 September, 2 Oct, and 6 Oct, on the latter day averaging one per minute; latest specimen was 18 Nov (JHF). *P. rapae*, *C. eurytheme*, *C. philodice*, *P. sennae*, and *J. coenia* were seen in the company of the monarchs.

URBAN COLLECTING: In urban Willow Grove, PA, WB took 11 species of *Catocala*, 3 of sphingids, and *A. io* in the course of the summer. A ♂ *Magneptychia libye* (det. by Lee D. Miller), was captured among supermarket bananas (c.o.o. ? Ecuador) in Jersey City, NJ, by FR, who is not claiming a range extension!

NEWFOUNDLAND. BUTTERFLIES: *C. titania boisduvalii*, Butterpot Park, Harbour Maine District (Avalon Peninsula) 1986, and Indian River PP, Aug '77; former a first record for eastern Nfld. (WE).

PRINCE EDWARD ISLAND. BUTTERFLIES: *Erynnis icelus*, bogs nr. Montague, Kings Co, 4-6 June; *P. napi*, Pembroke, Kings Co, 6 June. Bogs near Montague seem to offer proper habitat for *I. lanoraicensis* but none yet found (all RL).

NEW BRUNSWICK. MOTHS: *Calophasia lunula* and *Stretchia plusiaeformis*, Edmundston (HH). [Extraterritorial, from big bog in nearby Temiscouata Co, P.Q.: *Syngrapha surena* and *Lasionycta albinuda*, no dates (HH).]

NEW HAMPSHIRE. BUTTERFLIES: *E. persius*, *I. irus*, *L. m. samuelis* maintaining a toehold at Concord, Merrimack Co, site under TNC and power company protection (DS); collecting of these species should be avoided. *E. horatius* and *E. baptisiae* nr. Hudson, Hillsborough Co, 15 May, both STATE (DS).

MOTHS: *L. rachelae*, Ossipee pine barrens, Carroll Co, 15 Apr (LC); *Anisota virginianensis* and *C. amyntor*, Cheever, Grafton Co, 1st week of July (WB); *Condica confederata*, 5 Oct, and *L. lepida*, 15 Apr, Ossipee pine barrens (LC).

MAINE. BUTTERFLIES: *L. argyrognomon* (=idas) *empetri*, Great Wass Is., Washington Co (STATE), 23 July, on restricted preserve (JA).

MOTHS: Mating pair of *Pennisetia marginata*, Augusta, Kennebec Co, 26 Aug (AEB), proving that his blackberry patch yields more than unsurpassable berries!). Good ♂ *A. polyphemus*, Islesboro, Waldo Co, 1 Sept LATE (DW); *H. lamae*, day, 6 Aug, and *A. caja*, 22 taken, all after midnight, 6 Aug, in calcareous fen near Sherman, Aroostock Co (DS); *C. semirelecta*, fen near Sherman, 6 Aug (DS); *Syngrapha altera*, 30 July '84 & 27 July '85, *S. abstrusa*, 9 July '79 & 9 Aug '85, *Protocryphia secta*, 27 July, STATE, *Agroperina lutosa*, 5 & 10 July, all Enfield, Penobscot Co (LPG); *Hypocoena defecta*, fen near Sherman, 6 Aug (DS); *L. semiusta*, 28 Sept, and *L. thaxteri*, 28 Apr, Enfield (LPG); *Apharetra purpurea*, dark but well marked, Jugtown Plain pine barren, Cumberland Co, early July (JA, BS); same, pale & well marked, fen near Sherman, 6 Aug (DS); *Morrisonia evicta*, Islesboro, 1 Sept (normal flight in May, DW); *Agrotis pronuba* (the immigrant Common Yellow Underwing from Europe, extending from the Maritimes), Matinicus Is., Knox Co (STATE), 8 Aug '85 & Aug '86 (Federal surveillance checks, via AEB); *U. satyricus*, Enfield, 30 Apr (LPG).

MASSACHUSETTS. BUTTERFLIES: DS observed oviposition by *E. horatius* on *Quercus alba* in Medford, Middlesex Co; *Euphyes dion*, near Stockbridge, Berkshire Co, 17 July, STATE (DS); *C. inornata*, 1st brood peak 3 June, 2nd brood peak 14 Aug, Wilmington, Middlesex Co (SG); SG noted *C. pegala alope* feeding at dung and tree sap, but nectaring at only one species of flower, *Rhus glabra*, which also attracted 8 other butterfly species, Wilmington, Middlesex Co, 15 July.

MOTHS: *Eacles imperialis*, S. Dartmouth, Bristol Co, 30 July; *H. maia*, Fall River, Bristol Co, 30 Sept, EARLY; *Papaipema sulphurata*, Wareham, Plymouth Co, 26 Aug, pupa in *Decodon verticillatus*, ecl. 25 Sept (all MM); *Macrochilo* (=Hormisa) *orciferalis*, W. Bridgewater, Plymouth Co, 30 Sept, late (DS); *M. hypocritalis*, calcareous fens in Berkshire Co, 17 July, STATE (DS); *P. stenocelis*, W. Bridgewater, 30 Sept (DS); *A. purpurea*, Myles Standish SF, Plymouth Co, 25 July (DW); *Anepia capsularis*, Middlesex Fells, Middlesex Co, 19 June (LC); *M. mucens*, Myles Standish SF, 30 May (LC); *Schinia bifascia*, S. Dartmouth, 23 & 29 July (NM).

CONNECTICUT. MOTHS: *Apodrepanulatrix liberaria*, 10 Sept, *Platyperigea meralis*, 1-18 Sept, *X. capax* (STATE), 18 & 26

Sept, Shaker Pines, Hartford Co; Lacinipolia implicata, Naugatuck SF, New Haven Co, 20 Sept; Eucoptocnemis fimbriaris, Shaker Pines 18, 26 Sept (all LC).

RHODE ISLAND. BUTTERFLIES: P. m-album, Arcadia WMA, 14 Sept (LC).

MOths: Nepytia sp. (same as in LI, South NJ), 4 Aug (DS), and A. purpurea, 19 July, bait (CR), both Arcadia WMA, Washington Co.

NEW YORK. MOths: Heterocampa varia, 6 June, C. herodias, 24 July, C. jair (NJ variety), 24 July, and Chaetoglaea cerata, 22 Oct, all Dwarf Pine Barrens, Suffolk Co (PM).

PENNSYLVANIA. BUTTERFLIES: S. hayhurstii, Safeharbor, Lancaster Co, 8 Aug (AS). Hilltopping activity by both ♂ & ♀ B. philenor was observed in Gettysburg, as well as reciprocal harassing by a fresh ♀ B. philenor and a worn B. astyanax on 2 Oct (CS). C. ladon "marginata", Rothsville, Lancaster Co, 16 Oct (AS). D. plexippus larvae were seen in equal numbers on A. syriaca and L. incarnata in Gettysburg in '86 (CS).

MOths: L. rachelae, Long Pond pine barrens, Cumberland Co, 8 Apr (AW, TS); Caripeta aretaria, 29-30 Apr, and Idea violacearia, July, Presque Isle SP, Bedford Co (CB); Samia cynthia cocoons wild-collected, Lebanon, Lebanon Co, 21 Oct (JTF); S. cerisyi, McKean Co, 8 May (DT); Eumorphia fasciata, Lebanon, 28 May (JTF); P. assimilians, McKean Co, 8 May (DT); Properigea sp. near costa (det. DS, T. McCabe), Raystown Dam shale barren, Bedford Co, STATE, at BL trap (CB); Platyperigea meralis, South Mtn pine barrens, Cumberland Co, 25 Sept (AW, TS); A. purpurea, and S. maryx, Huntersville pine barrens, Lycoming Co, 9 July (DS).

NEW JERSEY. BUTTERFLIES: Hesperia attalus slossonae, 3 worn ♂♂ among stands of weedy Aristida, Atsion, Chatsworth (Burlington Co), and Whiting (Ocean Co) 28-30 July (DS); C. borealis found only in Newton-Springdale area (4 sites), Sussex Co, during two-year search of many similar habitats by DS & TB.

MOths: Metarranthis pilosaria at BL 20 June (WC), and Gabara (? 2 sp.) 28 July, Atsion burn, Burlington Co (DS, WC); C. pretiosa, Atsion, mature larva on Aronia arbutifolia, 28 May, reared out (DS), only record from extensive searching by DS, TB, & WC in three counties; Callopietria granitosa, A. purpurea ssp., and Loxagrotis sp. nova, all 28 July, Atsion burn (DS, WC).

MARYLAND. BUTTERFLIES: (Records "FMJ-D" and "FMJ-Y" were resurrected by David Wright from collections of Frank Morton Jones at Univ of Delaware & Yale-Peabody Museum, respectively.) T. confusis, Fort Hill, ALLEGANY Co, 13 June (RS); S. hayhurstii, Calvert Co, 7 Sept, LATE (indicating a partial 3rd brood, JHF); P. communis, Montgomery Co, 9 Nov, LATE (WG); H. phyleus, Snow Hill, WORCESTER Co, 19 Oct '36 (FMJ-D), and Calvert Co, 9 Nov, LATE (JHF); H. leonardus, vic. Sylmar, CECIL Co, 7 Sept (RS); H. metea, vic. Oakwood, CECIL Co, 10 May (RS); A. campestris, exceedingly common in Calvert Co (JHF); P. bulenta, still present in Dorchester Co, 25 June (JHF, WG); P. aaroni, Dorchester Co, 14, 25 June (WG); E. bimacula, Seneca, MONTGOMERY Co, 2 June '85 (HP); A. hianna near loammi, white spotting on HW beneath, Soldiers' Delight, Baltimore Co, 24 May (RS); P. panoquin, Dorchester Co, 25 June (JHF); E. olympia, Savage R. SF, GARRETT Co, 5 May (RS); C. eurytheme, Calvert Co, 4 Dec, LATE (JHF), and an aberrant with HW yellow, Calvert Co, 8 Nov (AP); Abaeis nicippe, New Germany SP, GARRETT Co, 5 May (RS); E. tarquinius, Swallow Falls SF, GARRETT Co, 26 Aug (RS); L. phlaeas americana partial ab. fulliolus, left FW with pale yellow ground color, Grantsville, Garrett Co, 13 June (RS); S. caryaevorum, Allegany Co, 1 Aug (WG); S. kingi, vic. Delaware Wild Lands Cypress Swamp, 13 July '85 & 5 July '86 (RS); M. gryneus, Sylmar, CECIL Co, 10 May (RS); I. augustus, CECIL Co, 20 May '20 (FMJ-D); I. nippon, Bacon Hill, CECIL Co, 30 Apr '04, and Bohemia, Cecil Co, 2 May '21 (FMJ-D); P. m-album, Savage R. SF, GARRETT Co, 5 May (RS); S. idalia, Conowingo, CECIL Co, 21 July '20 (FMJ-Y); S. atlantis, Cranesville Swamp area, & Garrett SF, Garrett Co, 15 June (RW), indicating persistence rather than transience (cf. SS for '85); C. harrisii, vic. Grantsville, Garrett Co, STATE, 16 June '85 (RS), and Potomac SF, Garrett Co, 13-15 June '86 (RS, RW); A. clyton, Conowingo, CECIL Co, 1 June '20 (FMJ-D).

MOths: S. eremitus, Savage R. SP, GARRETT Co, 12 Aug '85, 2nd record for state (JG); D. inscripta, Soldiers' Delight, Baltimore Co, 22 June, LATE (PK).

DELAWARE. BUTTERFLIES: P. massasoit chermocki, Bethel, Sussex Co, STATE, 12 July (RW); B. philenor, Bethel, 19 July (RS); E. marcellus, 5 July, H. titus mopsus, 5 July, S. kingi, STATE, 5 July, S. liparops strigosum, 22 June '85 & 5 July '86, Delaware Wild Lands Cypress Swamp, Sussex Co (all RS); M. hesseli, photographed nr. Bethel, Sussex Co, 11 May (EW); E. claudia, Gumboro, Sussex Co, 5 July, and also 22 July '83 (RS).



ZONE 11 HAWAII/PACIFIC ISLANDS: Coordinator: J.C.R. Riotte [R]. Contributor: Peter Hall [H], Ottawa, ONT, Canada. Weather in the first half of 1986 was still much on the dry side. Since then it seems to have returned more to the normal status. Butterflies seem to have fully recovered. With the moths this apparently will take a longer time.

OAHU AND HAWAII. For the first time, absolutely clear white specimens of Danaus plexippus were observed in Kalihi (Honolulu) in 2 colonies of normal and brownish/whitish ones and in one colony on the big island of Hawaii, [for the former R, for the latter Dr. F. Howarth (Bish.Mus.)]. Although it would have been possible to catch one of these new genetic developments, this was not done so as not to interfere with their further development. However, a sample of 45 pupae was taken from one Oahu colony. Of them, 3 were parasitised by tachinid flies; 7 died for unknown reasons; 35 produced adult specimens, in which 34 cases were normal brown forms, and one single specimen was the already well known brownish/whitish form; no pure white one was obtained. The brown specimens were released, the abnormal one is in the collection of Bishop Museum. The experiment will be continued, [R and Sabina F. Swift, Bishop Mus.].

MAUI. The sphingid Manduca blackburni was well observed on Nothoecstrum and also on its previously known foodplant Nicotiana glauca. Some larvae were brought to the Museum in Honolulu and photographed. The larvae are very interesting as they have elevated sculptured white adornments instead of simple lines. It seems that this sphingid has made a full come-back, [R].

FIJI. Hall submitted a list of what he had observed and/or taken at the beginning of September: Melanitis leda, Xoix sesara, Danaus plexippus, Euploea boisduvali, Hypolimnas bolina, Anaphaeis java, Catopsilia pomona, Eurema hecabe, Jamides bochus, Zizina otis, Oriens augustula (common), Hasora rhoda (a good record from Fiji; Bishop Museum has only 2 specimens from 1969), Badamia atrox which is not too uncommon, [H].



ZONE 12 THE NORTHERN NEOTROPICS: MEXICO, CENTRAL AMERICA, THE ANTILLES. Coordinator: Eduardo C. Welling M. Contributors: James P. Brock (JPB), Dr. Keith S. Brown, Jr. (KSB), Kenneth C. Hansen (KCH), Sterling O. and Eileen Mattoon (SO&EM), John T. McBurney (JTMcb), James R. Mori (JRM), Douglas Mullins (DM), Dr. Raymond B. Nagle (RBN), Steven J. Prchal (SJP), Vincent Roth (VR), Michael J. Smith (MJS), and Ralph E. Wells (REW). No weather reports were given but it seems that, in some places, drought conditions were in effect, especially in the Yucatan peninsula. Once again crop losses were heavy in this area, and where there might have been a fair crop, swarms of locusts fattened themselves. In November, out of season rains began, and at least in Quintana Roo and Belize continued right through the end of December. By this month the locusts had spread to western Yucatan and northern Campeche, and seemed to be on the increase. Let us wonder why inedibles (locusts, roaches, flies, rats, etc.) are always so abundant! We had word that in the Mexico City area there was rain in the afternoons for nearly 100 days in a row. It is unknown to me where the normal or over normal amount of rain area stopped and the drought area in the southeast of the country began. Coordinator's note: JPB notifies me that the *Chlosyne mazarum* reported from Sonora in the 1984 summary was misidentified; it is really *rosita*. People using this data in any way, take note.

MEXICO. SONORA. JPB, RBN, SJP, and MJS collected near Mariscal (57 km SW of Moctezuma) on March 29-30, finding *Hesperia pahaska*, *Atrytonopsis pittacus*, *Dione moneta*, *Apodemia hypoglaucia*, *Cyllopsis windi* and *Pindis squamistriga* (these last two probably important range extensions). From Aug 4 to 9, MJS, SJP, JRM, RFW, SO&EM, KCH, DM, and JPB collected on Hwy 16 localities mentioned in the 1984 report for Sonora and found most of the same species mentioned plus *Emesis emesia*, *Typhedanus undulatus*, *Windia windi*, *Heliopetes macaira*, *Phoebis intermedia*, *Chiomara mithrax*, *Zopyrion sandace*. On the Yécora-Santa Rosa road, they found the same species mentioned in the 1984 report plus *D. moneta*, *Apodemia nais*, *Paratrytone melane vitellina*, *Ministrymon phrutus*, *Atrytonopsis lunus*, *Phocides uranus*, *Catasticta nimbece*, and *Autochton cincta*. The *P. intermedia* and *C. nimbece* may well be new STATE RECORDS. Moth records for the state include *Hylesia continua cressida* on Hwy 16, 30 km E of Rio Yaqui, at light. *Anisota assimilis* larvae common on Oak (*Quercus*) sps. on which larvae of *Eacles oslari* and nests of *Gloveria howardi* were also found. On Aug. 8, *Citheronia splendens sinaloensis*, *E. oslari*, *Sphingicampa montana* and *hubbardi*, *Adeloneivaia isara*, *Rothschildia c. cincta* were taken at light. MJS notes that these species were taken in July (of which year?) and this would indicate a second brood; perhaps it may indicate nothing more than a late emergence date due to climatic factors. On the Yécora road, 6 km E of Santa Rosa, on Aug 6, taken at light were *Sphingicampa albolineata* (*S. raspa* according to Lemaire), *Automeris randa*, *iris hesselorum*, and *cecrops pamina*, *R. c. cincta*, and *H. continua cressida*. *A. iris* and *S. montana* larvae were found on *Mimosa biuncifera*.

VERACRUZ. KSB collected from Cuauhmapa to Poapan, near Fortín de las Flores, on Jan 25 at 1200 m elevation. On Aug 5-13 near Las Palmas, Omealca, he found interesting collecting including *Ituna lamirus*, *Limenitis archippus*, *Adelpha melantho*, *Asterocampa argus*, 4 sps. of *Doxocampa* including females, *Eribates battus*, 8 sps. of *Eurema* and a few *Graphium*.

GUERRERO. KSB, near Teocalco on Aug 14, found *Morpho polyphemus*, *Microtia elva*, *Myscelia cyananthe*, *Graphium thymbraeus* and abundant *Parides* sps.

MORELOS. On Aug 14 near Cuernavaca, KSB collected *Papilio garamas* and *G. thymbraeus*.

OAXACA. KSB collected in the Sierra Chinantla (northern reaches of the Sierra Juárez) on Jan 26 & 27 and on Aug 6 to 12. Elevations given for the following species are along the Valle Nacional-Yetla (75 m)-Mo Cuou (Cerro Pelon, at 2950 m) road. Without relating which species were found on whichever of his two collecting trips, he found *Morpho luna* (1500 m), *Caligo uranus* (200 m), 3 sps. of *Opsiphanes*, *Paramacera chinanteca* (2400 m), *Pedaliodes circumducta*, *Dioriste tauropolis*, *Satyrotaygetis satyrina*, *Cyllopsis suivalens*, *Cyllopsis* sp. (all at 1500 m), *Taygetis mermeria* and *Chloreuptychia sericeela* (200 m), *Anetia thirza* (2400 m, ova and foodplant found and reared by Jorge Llorente), *Mechanitis doryssus* larvae found on a *Solanum* (near *palinacanthum*) and reared to adults by KSB, *Callithomia hezia wellingi* and *Napeogenes tolosa* (750 m), *Oleria zea* (ova on *Lyciantes* sp.), *O. paula* (ova on a Solanaceae-Bassoria sp.), *Ithomia leila* (larvae defoliating a wild *Capetcum*), *Episcada salvinia* and *Pteronymia cotycto* on *Solanum geminata*, *Hymenitis oto* (ova and larvae on *Cestrum* sp.), 10 sps. of *Phyciodes*, *Polygonia g-argenteum* (1800 m), 8 sps. of *Adelpha*, 8 *Hamadryas*, *Catagramma lyca*, *C. casta* (both at 750 m), *Anaea schausiana* (1700 m, ova found on foodplant, reared by Armando Luiz M.), *Eumaeas debora*, *Arcas imperialis* and *cypria*, *Theritas mavors*, *Euselasia aurantiaca*, *Mesosemia tetrica*, *Baeotis hisbon zonata*, *Symmachia tricolor*, *probetor*, and *accusatrix*, *Dismorphia eunoë*, *jethys*, and *nemesis*, *Catasticta flisa*, *Hesperocharis graphites*, *Papilio abderus*, *P. esperanza* (sight record), *P. torquatus tolus*, *Prepona phaedra*.

YUCATAN and QUINTANA ROO. JTMcb collected from March 22 through 27, at the following localities in Yucatan: Chichen-Itza, Mpio. Tinum (CHI); Kabah, Mpio. Santa Elena (K), Uxmal, Mpio. Santa Elena (U), Santa Elena (SE). In Quintana Roo: Xelha (X), Tulum (T), Coba (C), and Akumal (A). He found *Battus philenor acauda* (C), *Eurytides philolaus* (C), *Ascia amaryllis (josephina)* (K), *A. monuste* (SE), *Phoebis statira* (SE), *P. philea* (A), *Eurema daira* (T,A), *Euptychia hermes* (A), *Danaus gilippus* (C,A), *Agraulis vanillae* (U), *Heliconius charitonius* (A), *Euptoleta claudia* (U), *E. hegesia* (C), *Melitaea theona* (C), *Didonis biblis* (CHI), *Mestra amymone* (T), *Siproeta steneles* (A), *Phyciodes frisia* (SE,A), *Anartia fatima* (X,A), *A. jatrophae* (A), *Dynamine mylitta* (X,T), *Strymon rufofusca* (K,SE), *Hemiargus* (probably *ceranus*) (SE,T), *Everes comyntas* (C), *Calephelis* sps. (T,A), *Pyrgus adepta* (K,A), *P. oileus* (A), *Cogia hippalus* (K), *Typhedanus undulatus* (SE), plus other species he was unable to identify with certainty. This is quite an interesting list, not because of the species, but on account of the time of the year when normally very, very few things are out. Welling noted a population explosion of butterflies along the north coast of Yucatán at Progreso, Chicxulub, Uaymitun, San Bruno, to Telchac, late Aug and into September. *Composia fidelissima*, *Ascia monuste* and *A. amaryllis*, *Papilio cresphontes*, *Danaus gilippus*, and other common species were exceedingly common. Further inland, to the south, butterflies were scarce; however in eastern Yucatán it appears that populations were more abundant than the previous years. Blacklighting in the forests of northern Quintana Roo in May, *Eacles ormondei*, *Copaxa multifenestrata*, and a *Rothschildia* sp. were way above normal in abundance, the second species actually swarming around lights of any kind in the forest, villages, etc. Sphingidae were up in numbers in May, soon dwindling to scarcity by mid-June, mostly common species being observed.



ZONE 13 SOUTH AMERICA. Coordinator: Boyce A. Drummond. Contributors: Keith S. Brown, Jr. (KB), Thomas C. Emmel (TE), Ronaldo Francini (RF, via KB), R. Hutchings (RH, via KB). KB's extensive contribution (5 countries) includes updates of previous FSS reports (1984 & 1985) on three Brazilian research projects: (1) the last strong colony of *Graphium lysithous harrisianus* in eastern Rio de Janeiro, (2) the rich butterfly community in the Serra do Japi in São Paulo, and (3) the butterfly inventory for World Wildlife Fund's Minimum Critical Sizes of Ecosystems project north of Manaus in Amazonas. In addition, KB reports that he continued (see FSS 1984) chromosome studies of long series of *Ethiaethria* (*Heliconiini*) from various localities suggest that there are at least 3 and maybe as many as 6 species in the *dido* complex, including a large new species taken in western Colombia in July. TE led trips to French Guiana and

Ecuador for Holbrook Travel and he reports on the findings of the 28 collectors who accompanied him on each trip (see also NEWS No. 4, 1986: pg 54-56).

PANAMA. In July, KB found good collecting east of the Panama airport, to 112 km into Darien. At 100 km E (16 km E of the Bayano high bridge), abundant Heliconius and Parides visited Palicourea flowers. On the road north from El Llano over the San Blas Mountains were many Philaethria, Heliconius hecalesia, H. sapho, Stalactis magdaleniensis, and Eumaeus miryas.

COLOMBIA. In the Rio Anchicayá valley in western Colombia, from Querebral (1300 m) down to sea level (Rio Tatabro), KB found a new giant species of Philaethria, Morpho theseus, M. cypris (♂ & ♀), Neruda godmani (lower elevations), Antirrhoea undulata, Anaea godrun, A. laura, Chimastrum carnutes, and several Symphachia spp. including threissa. Along the Rio Cocona, 1200-1600 m above Coello, W of Ibagué in the central Cordillera, KB took many Eueides vibilia ssp. nov., Heliconius eleuchia, H. cydno hermogenes, and 3 spp. of Diaethria. In the lowlands N of Cucuta, KB made several interesting finds, including Tithorea tarricina franciscoi (at sea level!), Eueides tales franciscus, Heliconius ismenius tilletti, Pierella luna (in exceptionally dry forest), and Oleria amalda. Near San Bernardo, E of Pamplona on the Colombia/Venezuela border, KB found a short-tubercled, dark larva of Athesis clearista on Capsicum ciliatum.

VENEZUELA. KB found many interesting mixed species (high/lowland, cis/trans-Andean, Colombia/Venezuela) on the Rio Frio, at Táchira (600 m), including Morpho (achilles x peleides), an all blue-black Heliconius sara (sara x thamas), and Papilio (zagreus x ascolius), a female, which refused to lay eggs on her (known) foodplant when confined, and did not give a fertile egg when expressed. The area had very abundant Ithomiinae, many also mixed, but including Melinaea lilis lateapicalis and M. messenina, and several new ssp. of Parides. Consul panariste was seen ovipositing on a large Piper sp. by a stream. At nearby El Pabellon (road to Delicias, 1500 m) KB found Elzunia humboldt nr. bomplandii and observed Eueides procula edias roosting individually under high tree leaves (1700 hrs). Above Barinitas (kms 37-53) KB found large numbers of Hyaliris coeno avinoffi and Ithomia terra, a few Hyaliris cana flebilis, Hyalenna alidella, Graphium columbus, G. dioxippus, Papilio rhodostictus, Heliconius cydno barinasensis, many species of Perisama, and Epiphile epimenes electra.

ECUADOR. On February 1, KB found excellent high-altitude, little-known Pronophilinae to be common in woods and meadows at km 201 on the road from Quito, east to Baeza, along a side stream from 8 km below Papallacta and 11 km above Coyuja (2200 m). Between May 10 & 18, TE (with a group of 28) collected at Tinalandia (730 m), a resort nestled in one of the few remaining stands of forest on the western slope of the Andes in Ecuador. In many years of collecting there (since 1969), this was the best May flight of moths and butterflies yet seen. The weather was excellent (sunny days and foggy nights), and over 250 species of butterflies were recorded. Many Heliconius, Mechanitis, Melinaea (and over 30 other species of Ithomiinae), Dismorphia, Pierella, Callitaera, Euptychia, Hamadryas (including vibex), Smyrna, Catagramma, Phyciodes, Panacea, Colobura, Prepona, Caligo (2 spp), Opsiphanes and other Brassolinae, Marpesia (6 spp), and a host of Riodininae and Lycaeninae species were taken in fresh condition. Moth collecting at black lights and mercury vapor lights was overwhelming, often with over 10,000 insects per sheet.

FRENCH GUIANA. TE (with a group of 28) collected in northern French Guiana from March 24 to April 2, with guidance from Lep. Soc. member Dominique Dauthville, insect pathologist and sphingid specialist at the AUCOM Institute in Cayenne. A 6-week drought ended in late March and the drier than usual weather greatly reduced the number of species and individuals expected. Moth collecting was excellent for Sphingidae and some Saturniidae, with the aid of a 12-meter tower and powerful lights erected by Dauthville in the coastal forest N of Cayenne. Morpho and Heliconius species were abundant 20 km SW of Cayenne in the hills near Camp Rochambeau and also several km N of Cayenne in coastal forest. Excellent collecting for Riodininae (close to 30 spp), Morpho (6 spp), Baeotus baeotus, Heliconius spp., Philaethria (dido complex), Parides spp., etc., was encountered in the inland site of Cacao. The palm hammocks in coastal savanna 39 km N of Cayenne yielded a rich assortment of Anaea, Bia, Pierella, Riodininae, and 3 Parides spp.

BRAZIL. AMAZONAS. (All records by KB; includes a report from RH via KB). Work continued (4 visits, 27 days) in the reserves of the WWF "Minimum Critical Sizes of Ecosystems" project N of Manaus in Amazonas. All three local Agrias species were very frequent in August-November, in large clearings, along with Prepona eugenes and various Anaea (vicinia, polycarmes, glaucone, xenocles). In October-November, Morpho metellus (=perseus, telemachus) was everywhere in its single yearly brood. Other interesting new species on the local list (now at almost 450 species, less Hesperidae, up from 375 in 1984 and 420 in 1985) included Caerois chorinaeus and Antirrhoea ornatus (completing the 10 expected Morphinae), Catoblepia versitincta, Caligo euphorbus, G. marsus, Taygetis zippora, Marpesia tutelina, Eunica sophonisba, Leucidia brephos, Graphium ariarathes, G. pausanias, Papilio thoas cinyras (the first Papilio seen, after 1300 man-hours observation), Thecla olbia, T. orcydia, Mesosemia calypso, Uraneis hyalina, Symphachia tricolor, Orimba disparilis, Xenandra helius, Alesa fournierae (and a new species in this genus), Menander hebrus, M. coruscans, Synargis tytia, Nymphidium plinthobaphis (recorded as a hybrid in the 1985 FSS), and N. omois. Also found were 4 Castnia: rutila, palitinus, cronida, and michaeli. RH (via KB) reported that an unusual, very orange-washed race of Anaea eribotes occurs near the Rio Negro in Manaus, unlike the very orange/blue forms found to the north.

RONDONIA. (All records by KB). In Costa Marques (Bolivian border of Rondonia) on July 1, were found mixed populations of Morpho menelaus (x godarti), Sais rosalia (promissa x badia), Neruda aoede (faleria x philipi), Heliconius ethilla (chapadensis x tyndarus), H. erato (amazona x venustus x phyllis), and H. melpomene (mostly penelope, some amandus genes), as well as Eunica ingens, Libythina cuvierii and a new (?) dark ssp. of Stalactis phlegia. On the new road to this town, near the Serra (and National Park) Pacaas Novos on eutrophic soils, were found Athyrtis mechanitis, Heliconius demeter eratosignis, Phyciodes aveyrona, Hypothyris anastasia niphas, Lycorea pasinuntia, Cithaerias aurorina, Ceratinia tutia ssp. nov., and Eunica sophonisba.

MATO GROSSO. (All records by KB). A rapid visit to the Chapada dos Guimaraes in central Mato Grosso in April showed Graphium common (protesilaus, orthosilaus), the first Hypothyris euclea recorded there (ssp. barii), and the usual abundance of Heliconiini, Callicore, Hesperidae, Phyciodes, Callithomia (2 spp.), and Hypoleria. On the Transpantanal highway on June 23, Anaea evelina and Hypna clytemnestra corumbaensis were common in open sunny woods, flying in more open areas among thorny trees and protected by millions of seed ticks.

RIO DE JANEIRO. (All records by KB). Throughout SE Brazil (RJ, São Paulo, Espirito Santo), a very dry winter and spring (except for strong rains in August) made conditions ideal for the spring generations of Papilionidae, concentrated along watercourses or on flower patches. Good mark-recapture data obtained in the last strong colony of Graphium lysithous harrisianus in eastern RJ, through 2 rather small generations and a supplementary flight between them, revealed that they age even more rapidly than troidine swallowtails, with an average lifespan of less than 2 weeks. The morph ratio tended towards strong predominance of form platydesma (77% of the 53 individuals marked or

recorded; up from 60% recorded in 1984 and 68% last year), perhaps because its model (Parides ascanius) was again active and common in a colony 500 m W of the primary Graphium concentration, with occasional individuals sympatric in both areas and between them. The site of the P. ascanius colony in Recreio dos Bandeirantes (see Otero & Brown, Atala 10-12: 2-16, 1986), is being filled, subdivided and built over, and the colony probably will not survive. Likewise, the site of the Graphium lysithous harrisianus colony in Barra de Sao Joao is being rapidly cut over and may not last another year; no further individuals of this nearly extinct subspecies were seen in other areas this year. No Graphium iphitas were seen in many days' walking through its former habitats, where forest is still intact [only the rare Castnia (Geyeria) strigata rewarded these efforts]. In Tres Rios, an old haunt of R. F. D'Almeida (and now of Luis Otero), Melinaea ludovica paraiya was reared on Markea viridiflora, and Placidula euryanassa was reared on Brugmansia candida; other foodplant records included Morpho anaxibia and M. menelaus (on Erythroxylon), Lycorea cleobaea (on a large-leaved Ficus), Hamadryas spp. including amphinome (on Dalechampia), Doxocopa (on Trema; in Japi, SP, uses Celtis), and Caligo (on Marantaceae). In Barra de São João, Callicore selima was very common, as was Pierella lamia ssp. nova, Arcas imperialis, Stalactis susanna (large group of larvae on Simaba glabra, intensively tended by ants), Adelpha aethalia, A. thespertia, "Thecla" talayra, Syrmatia dorilas, Mesene epalia, and Dalla diraspes. Also in this locality, single Danaus eresimus plexaure, Magnastigma teucra, and Alesa prema were taken, and 7 species of Castnia were frequent: decussata, boisduvalii, phalaris, acraeoides, thais, marcel-serres, and amycus (red/white morphs).

SÃO PAULO. (All records by KB; includes one report from RF via KB). In the rich butterfly community in the Serra do Japi, 191 Graphium males were marked and released on 4 days in the period October 9-16. This number included: 72 asius, 49 nigricornis, 38 dolicaon, 18 lysithous, 8 protodamas, and 6 bellerophon. Only a single "embrikstrandii" was captured; it seems to be a single-gene variant (orange antennae) of nigricornis, as travassosi (common in Rio) may also be. Only 5 released males were recaptured more than a day after marking; most were taken within minutes to hours after marking. Juveniles of G. nigricornis were found commonly on the same foodplants as last year (Cryptocaria achersoniana, Lauraceae). Reared specimens suggest this species might be conspecific with G. helios. Also in Japi, Pereute antodyca was common on Sept 2, before the main papilionid flight season; Eteona tisiPHONE and "Euptychia" pronophila larvae were found feeding on a robust bamboo, and Prepona chalciope was found feeding on Polygala, a most unexpected foodplant. Papilio cleotas did not colonize Japi this year. Actinote were intensively studied by RF, who discovered how to properly tell apart the many SE Brazilian species by larvae, foodplant, male genitalia and/or forewing scale shape in either sex. Eight species fly commonly in Japi in April (paraphelos, pellenea, pyrrha, carycina, rhodope=melanisans, discrepans, genitrix, canutia) and at least 5 others occur in nearby areas of São Paulo (magnifica, mamita, alalia, surima, zikani). All except the last (and 2 more little-known, possibly separate species) have now been thoroughly studied. A visit to the Morro do Diabo State Park in extreme western São Paulo, in June, just before the vegetation was cut in the lowest part preparatory to flooding it by a hydroelectric project (a most unfortunate event since it included the area inhabited by half the remaining individuals of the Black Lion Marmoset), showed very abundant but mostly uninteresting Nymphalinae/Charaxinae, but also a number of choice or little-known species such as Narope cyllastrus (also taken in Japi this year), Amphidecta pignerator, Taygetis larua, Sais rosalia (very far south), Adelpha delphicola, A. mincia, A. calliphane, Callicore selima, C. pygas, Anaea sp. nov. near evelina, Phyciodes pedrona, and Itaballia mandela.

ESPIRITO SANTO. (All records by KB). Graphium asius was very abundant everywhere this year, including on the coastal plain of northern Espirito Santo, far from its usual submontane habitats, but no females were seen. No new juvenile data for Graphium were obtained, even though large numbers of females (of protodamas, nigricornis, telesilaus, glaucolaus leucas, dolicaon, stenodesmus) were captured, especially in Linhares. Here, in late November on low Cordia flowers along a woods edge, all of these 6 species were flying in great abundance, with sex ratios of 1:1 in all cases (asius was absent on this alluvial floodplain). Also present in Linhares was the farthest north known Graphium lysithous, a new ssp. near sebastianus ("oedipus"). In the same area, the last known large colony of Papilio himeros was very strong, and both sexes were easily photographed on Lantana flowers. However, no females gave eggs when confined with known or suspected foodplants, and no expressed eggs hatched for any of these species (can anyone offer advice on how to tame the wildest swallowtails?).

From The Editor's Desk

June Preston



Another Season Summary is behind us and from the looks of it, there were lots of collectors in the field last year and lots of new county records for both butterflies and moths. The Zone Coordinators are to be commended for doing a great job, and our thanks to all of the collectors who contributed their data. While some members aren't interested in the Season Summary, it does seem to have its place, and the information in it is adding greatly to our knowledge of butterfly and moth distribution in the Western Hemisphere. This is the fifth Season Summary issue I have worked on, and it is the longest yet in these 5 years. The zone 4 report is shorter this year than last as the Rocky Mountain States have been getting good coverage throughout the years so the numbers of butterfly records are beginning to taper off. However, the Zone 5 report this year is twice as long as last year's as more collectors are finally starting to cover the plains states and are discovering the wealth of butterflies and moths in the prairies. The Annual meeting in Ottawa and accompanying field trips enhanced the records for Zone 7 as did the Pacific Slope

meeting for Zone 3. Also, some of the records from Tom Emmel's field trips to South America are finally getting made known in the Zone 13 report. There was a report of some sort from every state but Georgia and Vermont and from all but the Northwest Territories and Nova Scotia in Canada. We are still leaning heavily toward the butterflies, especially in the midwest and west, but I'm pleased to notice that moth reports are increasing.

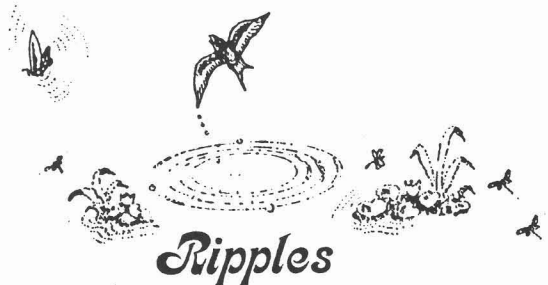


GRESSITT CENTER DEDICATED

Bishop Museum's Department of Entomology was formally dedicated as the J. LINSLEY GRESSITT CENTER FOR RESEARCH IN ENTOMOLOGY on 26 July 1986. The event was well attended by the local entomological community, as well as by two of the Gressitt daughters, Mrs. Rebecca Lau and Mrs. Elyn Brown, and by Dr. Felicia Bock and Ms. Audie Bock, sister and niece of the late J. L. Gressitt. Dr. Allen Allison, Bishop Museum Zoologist, officiated the ceremony, Drs. Alexander Spoehr and Edward Creutz, former directors of Bishop Museum,

gave addresses, and Dr. Felicia Bock gave closing comments. Highlighting the dedication, a bronze plaque was unveiled citing the late Dr. Gressitt as a "Leader in taxonomy, biogeography, and biological exploration; noted founder of research centers and scientific publications; and preeminent builder of Bishop Museum's entomological collections." The plaque says of Gressitt that "He never faltered in climbing great mountains, of the earth and of the mind."

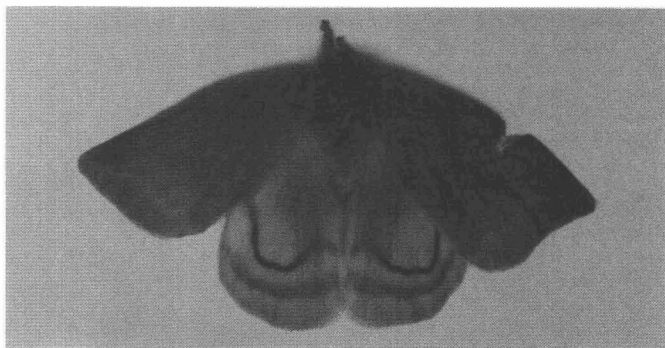
Under the direction of the recently appointed Chairman of Entomology, Dr. Scott Miller, the Museum has recommitted to the Department's mission of being a center for the study of the systematics, biogeography, and ecology of insects and related arthropods of the Pacific Basin and their source areas.



Jo Brewer, Ed, 257 Common St, Dedham, MA 02026

Dear Jo,

Enclosed is a photo of a ♀ Automeris louisiana F&B which I reared. It lacks all traces of eyespots on all wing surfaces, above and below. I don't believe this has ever been documented before.



The year 1986 can certainly be called the "Year of the Catocala" here in Louisiana. Until this past season, I considered 1985 to be the best Catocala season in 25 years of collecting insects. Catocala usually begin flying in Louisiana in early April, but in 1986 they were practically non-existent until the last week of May when the rains began on a daily basis and continued through June quite heavily. So did the Catocala in unbelievable numbers. On June 1, 1986, collecting with one light at Kisatchie National Forest, Natchitoches Parish, 743 Catocala were recorded in this one night. There were 22 species with 4 new state records and one new species. About half of them were C. epione. The others, listed in order of abundance, were: C. andromedae, gracilis, amica, connubialis, ilia, micronympha, dejecta, mira, similis, muliercula, jair, louisae, nova, alabamae, judith, ultronia, titania, messalina, orba, insolibilis and texarkana. There were singletons of the last 2 species mentioned while the first 2 numbered over 50 specimens. This must certainly be a quantity record for one light in one night. Two weeks earlier, in the same location, there were very large numbers of Haploa colona, reversa and clymene in a single night.

At my home, I found increasing numbers of Catocala during this past June. During the first week over 1000 specimens per night were attracted to bait and light, then for the next 2 weeks about 1000 to 1500 per night and finally there were upwards of 4000 or more for 5

consecutive nights before they started tapering off. Even on full moonlit nights large numbers came to the yard.

Catocala muliercula was extremely abundant this season. Bait traps emptied in the morning had collected hundreds more by mid afternoon. Attracting large numbers of Catocala in daylight hours was a first for me. Muliercula was so abundant that at the peak of the flight period, hundreds could be flushed from the leaf litter just walking around my yard. The species apparently prefers resting on the ground, as practically none were found on tree trunks, while other species were prevalent there.

I noted a listing of various recipes of fermenting bait used by our members and offer my own for a larger quantity. In one 55 gallon drum, blend 400-600 apples or peaches, 55 lbs of granulated sugar and 10 gal. of beer. Ferment at least 2 weeks or preferably one year. Make next seasons' bait now.

Vernon A. Brou, Jr.
Abita Springs, Louisiana

The answer to this phenomenal uprising of Catocala is hard for us here in Massachusetts to envision. It sounds as though a trail of powerful pheromones had come to rest in V.B.'s back yard! (More later from him)-J.B.



Research Notices

● I am currently (1/2/87) rearing Neophasia terlootii larvae (ex ova from a wild-caught female), and would like to hear from anyone who knows of an early stages/life history account of this species, has raised it itself, or simply has an interest in this pine-feeding [probably at least Pinus ayacuhuite (ID to be confirmed) in the area of capture] Pierid. Contact Keith Wolfe, 770 Lakeview Avenue, San Francisco, CA 94112

● WANTED: For a study of the Monarch butterfly (Danaus plexippus) in western North America (all areas west of the Great Plains). All records of the first date Monarchs are seen in the spring, the last date they are seen in the fall, their direction of flight and the numbers observed. Chris Nagano, Entomology Section, Natural History Museum of Los Angeles County, 900 Exposition Blvd., Los Angeles, Ca. 90007.

● WANTED: Correspondence and/or exchange with other lepidopterists who have collected Celastrina ladon anywhere in North America. Records are needed for all subspecies and forms, including dates, locations, and field notes. I can purchase or exchange for small series of specimens from all 49 states, Canada, and Central America. ALSO WANTED: Correspondence with any collectors who have ever collected butterflies in Rhode Island. Am in need of records for all species to incorporate into the forthcoming Rhode Island State List. Contact Harry Pavulaan, 1919 N. Daniel St., #201, Arlington, VA 22201.

● Data is needed on the butterfly fauna of Tulare County, California, including Sequoia National Park. Information from Sequoia-Kings Canyon National Parks is much needed regardless of county. Information gathered will be used in writing future papers about the butterflies occurring in these regions. Current checklists available upon request. Please contact Ken Davenport, 6601 Eucalyptus Drive #325, Bakersfield, CA. 93306.

Notices



OHIO LEPIDOPTERISTS' MEMBERSHIP INVITATION

The Ohio Lepidopterists' (founded 1979) cordially invite you to become a member. Four quarterly newsletters. Discount prices on various entomological supplies and publications to members. Membership dues are \$5.00 annually (\$3.00/student). Send dues with name, address, and interests to: David C. Iftner, 2161 Heatherfield Avenue, Worthington, Ohio 43085.

JOURNAL UPDATE

The first issue of Volume 41 of the Journal of the Lepidopterists' Society should be out in Mid April. The following issues of the Journal should be back on schedule by this summer.

1987 ELECTION RESULTS

Members cast a total of 525 ballots in the Society's 1987 election, representing a return of approximately 33%. Results are tabulated below, with the successful candidates indicated by an asterisk (*). All newly elected officials assume office at the Annual Meeting in Berkeley, California on 28 June 1987, except the Treasurer whose term of office is retroactive to 1 January 1987.

The Society extends its congratulations to the winners and thanks to all candidates for their willingness to serve the Society.

| | |
|--|----------|
| PRESIDENT ELECT | |
| *Jerry A. Powell | 491 |
| Abstentions & Void | 34 |
| VICE PRESIDENTS (3) | |
| *Jacqueline Y. Miller | 474 |
| *Jean-Francois Landry | 443 |
| *Atuhiro Sibatani | 437 |
| Abstentions & Void | 51 |
| TREASURER | |
| *James P. Tuttle | 473 |
| Abstentions & Void | 52 |
| EXECUTIVE COUNCIL MEMBERS-AT-LARGE (3) | |
| *Julian P. Donahue | 464 |
| *John E. Rawlins | 374 |
| *Jo Brewer Winter | 416 |
| Barry Wright | 241 |
| Abstentions & Void | 61 |
| KARL JORDAN MEDAL REPRESENTATIVE | |
| *George L. Godfrey | 451 |
| Abstentions & Void | 74 |
| HONORARY LIFE MEMBERSHIP FOR IAN COMMON (requires approval by at least 80% of members voting) | |
| *Yes | 480(91%) |
| No | 12 |
| Abstentions & Void | 33 |
| CONSTITUTIONAL AMENDMENT: (removes limitations on number of terms editors may serve; requires approval by two-thirds of members voting) | |
| *Yes | 433(82%) |
| No | 36 |
| Abstentions & Void | 56 |

OFFICERS OF THE SOCIETY ARE NOW AS FOLLOWS:

Through 28 June 1987:

| | |
|--------------------------|--|
| President | Douglas C. Ferguson |
| President-Elect | Jerry A. Powell |
| Immediate Past President | Clifford D. Ferris |
| Vice Presidents (3) | Gerardo Lamas M. Olaf H.H. Mielke Ebbe Schmidt Nielsen |
| Secretary | Richard A. Arnold |
| Treasurer | James P. Tuttle |

After 28 June 1987:

| | |
|--------------------------|--|
| President | Jerry A. Powell |
| Immediate Past President | Douglas C. Ferguson |
| Vice Presidents (3) | Jacqueline Y. Miller Jean-Francois Landry Atuhiro Sibatani |
| Secretary | Richard A. Arnold |
| Treasurer | James P. Tuttle |

EXECUTIVE COUNCIL MEMBERS-AT-LARGE:

(term expires at annual meeting in year indicated)

1987

Boyce A. Drummond III
John Lane
Robert K. Robbins

1989

M. Deane Bowers
Richard L. Brown
Paul A. Opler

1988

Mirna Martins Casagrande
Edward C. Knudson
Frederick W. Stehr

1990 (assume office 28 June 1987)

Julian P. Donahue
John E. Rawlins
Jo Brewer Winter

EDITORIAL COMMITTEE:

| | |
|--------------------------|------------------------|
| JOURNAL Editor | William E. Miller |
| NEWS Editor | June D. Preston |
| MEMOIRS Editor(Chairman) | Charles V. Covell, Jr. |

ICZN

The following application has been received by the Commission and has been published in volume 43, part 4, of the *Bulletin of Zoological Nomenclature* (11 December, 1986). Comment or advice on it is welcomed and should be sent to the Secretary, P. K. Tubbs, c/o the British Museum (Natural History), Cromwell Rd, London SW7 5BD, England use Reference number ITZN 11/5. Comments will be published in the *Bulletin*.

Case No 2426 *Lycaena mirza* Plötz, 1880 (Insecta, Lepidoptera): proposed conservation by the suppression of *Lycaena mirza* Staudinger, 1874.

The following opinion has been published by the International Commission on Zoological Nomenclature in the *Bulletin of Zoological Nomenclature*, volume 43, part 4 on 11 December 1986:

Opinion No.

1418 (P. 325) *Glyphipterix* Hübner, [1825] (Insecta, Lepidoptera): *Tinea bergstrasserella* Fabricius, 1781 designated as type species.

TWO SHORT TERM POSITIONS OPEN

The Lloyd Center for Environmental Studies is seeking two interns, one for the summer and one for the fall session, to assist with a continuing light-trap survey and to help develop population and distributional surveys of state listed rare Lepidoptera. Housing and a small stipend are provided to the interns. Applicants should have completed their sophomore year in college. Starting dates are May 18 and September 8. For more information contact Mark J. Mello, Research Coordinator, Lloyd Center for Environmental Studies, 430 Potomska Rd., So. Dartmouth, MA 02748.

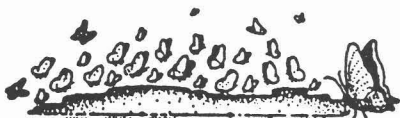
LUXURY IMPROVED INSECT DISPLAY DRAWERS A POSSIBILITY

The Innovative Design Group has developed a design for an improved insect display drawer incorporating some novel concepts. Three completed prototypes have shown the design to be practical, and a batch of eighteen drawers for our own use is under construction.

If sufficient interest exists, we are considering possible production of drawers to order, satisfying the buyers individual specifications. Some of the salient features we would offer follow:

1. Fine furniture quality and appearance.
2. Customers choice of solid walnut, red or white oak, cherry, maple, or other available species of lumber.
3. Customers choice of Cornell, California Academy, or his own dimensions.
4. Airtight construction utilizing gaskets to seal the glass and the cover-bottom interface.
5. Glass held in place by a system of snap in retainers with no screws or nails providing easy replacement or removal for cleaning without disassembling the cover.
6. Accurately mitered corners, glued and splined with hidden kerfs.
7. Special thin glass to minimize weight.
8. Grain matched cover and bottom.
9. Customers choice of hardware and finish.

Needless to say, such drawers will be expensive but well worth it to those desiring the very best. If justified by response, we are prepared to design and construct matching cabinets to house the drawers. Readers with a serious interest are asked to write to Waldemar E. Kmentt, P.E., Innovative Design Group, 3650 Wood Trail, Beloit, Wisconsin, 53511. Their response will be acknowledged, and they will be informed when and if we elect to proceed with the project.



Forthcoming Meetings

THE LEPIDOPTERISTS' SOCIETY 38TH ANNUAL MEETING

University of California, Berkeley, CA., U.S.A.
June 25-28, 1987

The Department of Entomological Sciences, University of California, Berkeley, will host the 1987 meeting of the Society, during the last weekend in June. Please refer to the announcement on pg 11 of the Jan/Feb., 1987, issue of the NEWS of the Lepidopterists' Society for details.

Deadlines: April 15, 1987, for submission of titles and abstracts of papers on the program and for registration without late fee surcharge. June 10, 1987, for Residence Halls and food services package and for banquet reservations.

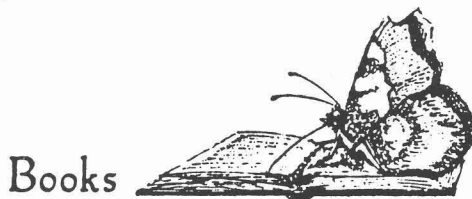
Address questions to: J. A. Powell, 201 Wellman Hall, University of California, Berkeley, CA 94720, for matters relating to local arrangements; J. T. Sorensen, California State Dept. of Food and Agriculture, Lab Services, 1220 N Street, Sacramento, CA, 95814, for inquiries about the program.

XVIII INTERNATIONAL CONGRESS OF ENTOMOLOGY

The 18th International Congress of ENTOMOLOGY will be held at the University of British Columbia, Vancouver, B.C., Canada from 3 to 9 July, 1988. For information, please contact Dr. G. G. E. Scudder, Secretary-General, XVIII International Congress of Entomology, Dept. of Zoology, University of British Columbia, Vancouver, B.C. V6T 2A9, Canada.

1987 INTERNATIONAL SCIENCE FAIR

The 1987 International Science Fair will be held in July 1987 in Quebec, CANADA. As of mid Dec 1986, 29 countries had confirmed their intentions to participate. They are: Argentina, Australia, Belgium, Benin, Burkina Faso, Cameroon, Canada, Czechoslovakia, Egypt, France, Gabon, Great Britain, Greece, India, Ireland, Italy, Mexico, Morocco, The Netherlands, New Zealand, Norway, Philippines, Portugal, Senegal, Sweden, Switzerland, Tunisia, The United States and Zambia.



Books

NEW BOOK

BUTTERFLIES OF COSTA RICA AND THEIR NATURAL HISTORY. First comprehensive coverage of Costa Rican Papilionidae, Pieridae and Nymphalidae. 560 species in color, with natural history information. Excellent book, published February 1987. For more information, write TRANSWORLD BUTTERFLY CO, (LS), Apartado 6951, San José, Costa Rica, Central America.

PUBLICATIONS IN THE OFFING

The Lepidoptera Research Foundation has just announced its decision to publish The Genus Asterocampa, an approximate 120 page work with 5 color plates, by Tim Friedlander, as issue 4 of volume 25 of the Journal of Research on the Lepidoptera. The paper will be issued as a separate book for \$20.00 after publication. By joining the Foundation now, all of volume 25 is available for \$15.00. After Volume 25 membership will be \$18.00.

The Foundation will also publish Peigler: The Genus Attacus in late 1987. The book will contain about 200 pages and have 8 color plates illustrating all the taxa of the genus. The price will be \$25.00, but available pre-publication to members of the Lepidopterists Society for \$18.00.

For Foundation membership information write: Editor, Lepidoptera Research Foundation, 9620 Heather Road, Beverly Hills, CA 90210, USA.

New Members



ARMSTRONG, LYLE C. (Ph.D.): Darien Compound Safaries, P.O. Box 909, Panama 9A, REPUBLIC OF PANAMA; telephone 55-7272.

BENTON, MICHAEL R.: 3 Todd Drive, Brunswick, GA 31520; home telephone (912) 265-1033.

BRAY, TANYA (Ms.): 9708 Grover, Omaha, NE 68124; home telephone (402) 397-4914, work (402) 978-7049.

BREITHAUPT, MACELIA (Ms.): 550 South Clay, #B2, Kirkwood, MO 63122; home telephone (314) 821-1447.

BRINCKERHOFF, JORIS A.: Apdo 323, 6150 Santa Ana, COSTA RICA.

BURNELL, ELVIN: 1220 Sheier Road, Mansfield, OH 44903.
COHEN, EDGAR: 5454 Marsh Hawk Way, Columbia, MD 21045.

COWLING, JAMES: 4317 53rd, San Diego, CA 92115.
DOWNS, KAREN M.: 2741 Octavia, San Francisco, CA 94123.

ELLIS, EDWIN: P.O. Box 38231, Olmsted Falls, OH 44138.
GARMY, GUSTAV J. (Ph.D.): 3142 Rush Mendon Road, Honeoye Falls, NY 14472.

GOLDSTEIN, PAUL: 939 Sulgrave Lane, Bryn Mawr, PA 19010.

GREEN, DEBRA: Rural Route 01, Box 287, Underhill, VT 05489.
 HOLMQUIST, DAVID V.: 8318 Doyle Spring Road, #12, Little Rock, AR 72209.
 KING, EILEEN (LRPS): 47 Lawson Lane, Ridgefield, CT 06877.
 KOPP, FAY A. (Ms.): Rural Route 01, Box 30, Klingerstown, PA 17941-9718.
 MARUYAMA, KIYOSHI: 2115 Nakanoshima, Tama-ku, Kawasaki, Kanagawa, JAPAN.
 McCORD, JOHN W.: 1778 North Mayflower, Charleston, SC 29412.
 MEEKEL, HENDRICK J.: P.O. Box 549, Pitt Meadows, British Columbia V0M 1P0, CANADA; telephone (604) 405-6334.
 PALMER, KATJA: 2027 East 51st Place, #C, Tulsa, OK 74105.
 PAYNE, TROY: 64 Black Oak Lane, #22, Louisville, KY 40216; home telephone (502) 447-2619.
 PHILLIPS, LYLE: 170 Park Ridge Drive, #5, Athens, GA 30605.
 PITTAWAY, A.R.: 15 Beech Hall Road, London E49NJ, ENGLAND.
 ROBBINS, MICHAEL: 308 Hillcrest Drive, Yreka, CA 96097-2222; home telephone (916) 842-2801, work (916) 842-4179.
 SALSU, STEFANO: Via Pastrengo No. 19, 42100 Reggio Emilia, ITALY.
 SEWELL, BYRON: 867 Whispering Way, South Charleston, WV 25303; home telephone (304) 744-2055, work (304) 747-3609.
 SEWELL, VICTORIA: [same address & phone as Byron Sewell]
 SIMMONS, TIM: P.O. Box 2212, Edgartown, MA 02539.
 TRUE, DARYL O.: 550 South Clay, #B2, Kirkwood, MO 63122; home telephone (314) 821-1447.
 TUTTLE, MARGARET: 3838 Fernleigh Ave., Troy, MI 48083-5715.
 WISDOM, SCOTT: 1714 West 22nd Street, Lawrence, KS 66046.

GALI, FRANK: 6131 NW 40th Terrace, Virginia Gardens, FL 33166.
 JEDELE, RICHARD P.: 307 Hiscock, Ann Arbor, MI 48103-3220.
 KING, RON: 3701 Sheley Street, D6, Indianapolis, IN 46227.
 KMENTT, WALDEMAR E.: 3650 Wood Trail, Beloit, WI 53511.
 LaBEAU, HENRY A.: 5113 Rollinglen Loop East, Lakeland, FL 33809-2654; telephone (813) 859-5150.
 LEA, MARCEL: 106 Bluewater Crescent, Winnipeg, Manitoba R2J 2P8, CANADA.
 LEES, DAVID C.: Flat 4, 13 St. Augustine's Avenue, South Croydon, Surrey, ENGLAND.
 LEWIS, D. S. C.: "Threeways," Sulgrave, Banbury, Oxfordshire OX17 2SG, ENGLAND.
 McARTHUR, DAVID C.: 3377 Pharoahs Lane, Sebastopol, CA 95472-9410.
 McCAFFREY, J.: Two Wheaton Center, #2006, Wheaton, IL 60187.
 PLAGENS, MICHAEL J.: 4710 North 10th Place, Phoenix, AZ 85014.
 SCRIBER, J. MARK: Dept. of Entomology, Michigan State University, East Lansing, MI 48824-1115.
 SLOTTEN, JEFFREY R. (D.D.S.): 4083 Sunbeam Road, #1215, Jacksonville, FL 32217.
 STEEN, JAMES A.: 15560 Patricia Street, Moreno Valley, CA 92388.
 TOOT, JAMES: 6841 Day Drive, #726, Parma, OH 44129.
 TUCKER, JAMES R.: 925 Hickory, Red Bluff, CA 96080.
 ULLRICH, RICHARD D.: 1108 Saybrook Circle, Lilburn, GA 30247.
 WATSON, CHARLES N., JR.: 252-K Rock Creek Road, Clemson, SC 29631.
 WU, BRIAN W.: 1275 Chapel Street, #10, New Haven, CT 06511.

CORRECTIONS AND MINOR CHANGES TO THE 1986 MEMBERSHIP DIRECTORY

ALLYSON, Y. SUZANNE: (CHANGE institution name to "Biosystematics Research Centre").
 ASTON, CHRIS: (CORRECT street name to "York").
 BAGGETT, HOWARD D.: (CHANGE city name to "Tampa").
 BENYAMINI, DUBI: (CHANGE postal code to "71947").
 BOLTON, STANWOOD K., JR.: (CORRECT street name to "Quaboag").
 CHILCOTE, CHARLEY A.: (CHANGE ZIP code to "48108").
 DeLISLE, GILLES: (ADD "C.P. 566" after street address).
 ELLISTON, MIKE: (CORRECT postal code to "R2C 4N3").
 GILBERT, JEFFREY C.: (CHANGE street address to "1170 Redwood Drive").
 GUNNING, WILLIAM J.: (CHANGE street address to "2215 Blossom Valley Road").
 LETSINGER, RAE: (CHANGE box number to "Box 1464").
 MANLEY, THOMAS R.: (CHANGE box number to "Box 269").
 PI-TZU, CHANG: (CHANGE postal code to "10099").
 ROMEYN, RICHARD L.: (CHANGE street address to "3416 Elm Drive").
 VAN RONZELEN, O.H.: (REPLACE initials with "Mrs. Wanda").
 YOUNG, MICHAEL E.: (CHANGE street number to "18326").

Address Changes



ADAMS, CHRISTIAN: P.O. Box 5, Alloway, NJ 08001-0005.
 ALBRIGHT, RAY: 18115 SE Neck Road, Dayton, OR 97114.
 ARMSTRONG, HAROLD L.: N. 1385 Bayou Road, Fremont, WI 54940.
 ASBREY, RODERICK: 853 Three Willow Court, Palatine, IL 60067.
 BALINT, ZSOLT: Martonhegyi ut 47/b, Budapest XII, H-1124, HUNGARY.
 BRANSKY, STEVEN C.: 1528 Parkside Drive, Park Ridge, IL 60068.
 BROWN, RICHARD M.: 9202 San Pasqual Way, Stockton, CA 95210-1261.
 BURGESS, RICHARD PAUL: 8 Glenville Ave., Enfield, Middlesex EN2 0ER, ENGLAND.
 CATALANI, HARRY K.: 3821 45th Street, #3, San Diego, CA 92105.
 CLARK, DAVID G. FRITZ: 7415 Buffalo Ave., Takoma Park, MD 20912.
 CORKETT, JOHN A.: 421 La Riviere St., Winnipeg, Manitoba R2H 1A5, CANADA.
 DAMMAN, HANS: Division of Biology & Medicine, Brown University, Providence, RI 02912.
 DEMSKI, RONALD: 17430 Bluff Drive, Grayslake, IL 60030-3005.
 DONLY, J.H.: 30 Loweswater Ave., Unionville, Ontario L3R 5Z7, CANADA.
 EVANS, DAVID L.: 12666 36th Street, Yuma, AZ 85364.
 FLAIM, DAVID: 4902 Parkton Court, #3, Baltimore, MD 21229.
 FORS, MARY F.: 404 5th Avenue NW, Mandan, ND 58554.
 GAINES, JACK H.: 5332 Bryant Circle, Westminster, CA 92683.
 GAINES, LINDA J.: 5332 Bryant Circle, Westminster, CA 92683.

The Market Place

Buy • Sell • Exchange • Wants



Items submitted for inclusion in this section are dealt with in the manner set forth on page 8 of the Jan/Feb 1987 NEWS. Please note that in keeping with the guidelines of the Society, henceforth no mention of any species on any threatened or endangered species list will be accepted in these items. This will include all Ornithopterans now and for the foreseeable future. Items will be accepted from members only and will be printed only once unless entry in the maximum of two successive issues is requested. Please keep items short. A

maximum of 100 words is allowed. SASE calls for a self addressed stamped envelope.

The Society, as always, expects all notices to be offered in good faith and takes no responsibility for the integrity of any advertiser. Any disputes arising from such notices must be resolved by the parties involved outside of the structure of the Society.

WANTED: Correspondence with anyone having conducted business of any nature with International Specimen Supply or a W. Bryce Richfield of Goleta, California. Please contact Leroy C. Koehn 16225 Huntley Rd. Huntsburg, Ohio 44046.

WANTED: The following books and publications are desired. The Butterflies of the West Coast by W. G. Wright, On the Sphingidae of Peru by A. M. Moss, The Cranbidae of North America by C. H. Fernald, Butterflies of Cuba by D. Marston Bates, Monograph of the Genus Erebia by B. C. Warren, Butterflies of the Australian Region by B. D'Abbrera. State condition and price. Contact Leroy C. Koehn, 16225 Huntley Rd. Huntsburg, Ohio 44046.

FOR SALE or EXCHANGE: One copy of each in good condition, The Bombycine Moths of North America, Part II Vol. IX, by A. S. Packard, and Illustrations of the North American Species of the Genus Catocala by Barnes & McDunnough. ALSO FOR SALE: Collapsible Bait Traps of exceptional quality and durability. Portable Light Traps with 8 or 15 watt BL, AC or DC power supply. Rearing sleeves of nylon fiberglass screen with a 22 inch zipper. For more information and prices, contact Leroy C. Koehn, address above.

WANTED: Correspondence desired with anyone having conducted business of any nature with ALL BUTTERFLIES, INC, or with a Dan Gilmour of Cleveland, Tennessee 37311. Please contact Eduardo C. Welling M., Apartado Postol 701, Mérida, Yucatán, Mexico.

WANTED - Correspondence with anyone presently trapping Sesiidae with pheromones. I am presently embarking on a trapping program and would like to source different pheromones. I am willing to trade specimens and ideas. John P. Walas, 844 Red River Road, Apt. #810, Thunder Bay, Ontario, Canada P7B 5K4. Phone 807-345-8277 (or after June 30, 1987, 807-767-0749).

FOR SALE: "Journal of Research on the Lepidoptera," Vol 1-17 incl. Best offer. John M. Snider, 3520 Mullidae Ave, San Pedro, CA 90732.

FOR SALE OR EXCHANGE: Pupae of Anisota senatoria, Endromis viraecolora, Agria tau. Contact Kenneth R. Knight, 433 Brady NW, Comstock Park, Michigan 49321 or phone (616) 784-6243.

EXCHANGE: I have a small quantity of S. ligustri pupae. Would like cocoons/pupae of E. imperialis, C. regalis, L. katinka, H. gloveri. Martin Jackson, 2065 Creelman Ave, Vancouver, British Columbia V6J 1C2, Canada.

CONTACTS WANTED with breeders of Hawkmoths, Silkmoths and Papilio. I am willing to buy pupae if exchange is not possible. I have many English and European butterflies and moths in pupal form to offer. Some set specimens as well. All letters will be replied to. This is a hobby and not commercial. Peter Harrison, "Sanclu," 134 South Street, Whitstable CT5 3EL Kent, England.

FOR SALE: All specimens papered, in good condition with full data. Charaxes from rain forests of Central Africa, Zaire; Brazzaville; Central African Republic, Bangui. Including C. candope, ummines, laodice, portos, ameliae, tiridates, zingha, bohemani, monifar, varanes, protoclea. Also Charaxes from Bonga, Ethiopia. Many Cymothoe sangaris and Danaidae from Zaire. Many Charaxes from Letecia, Columbian port of Amazon, also Caligos. Large variety of Heliconiinae from Peru. Papilio - menestheus, hesperus, phorcas, nireus from Zaire. Papilio from Bonga, Ethiopia. P. thersitis, Jamaica. Urania leilus and Historis orion, Columbia. Many Foresters from Central Africa. John Bradley, 90 Pembroke Rd, Clifton, Bristol BS8 3EG, England.

FOR SALE: Surplus specimens of papered Malawian butterflies (mainly Charaxes but also some Papilio and others) and also some cetonid and other beetles. D. Lewis, 'Threeways', Sulgrave, Banbury, OX17 2SG, U.K.

CONTACTS WANTED: U.K. based butterfly breeder specialising in the larger Nymphalidae seeks contact with others worldwide with similar interests. My current projects include breeding Apatura, Charaxes, Chitoria, Dilipa & Sasakia. I am particularly keen to hear from breeders and collectors with field experience of Agrias, Prepona and other Neotropical Nymphalidae. All correspondence welcome. Contact John McFeely, 90 Stonechat Ave, Abbeydale, Gloucester GL4 9XF England.

WANTED: To purchase pupae or ova of North and South American moths (Saturniidae, Sphingidae or related species). Also pupae or ova of any Rhopalocera species from the Americas. Small or large quantities. Please send lists and offers of availability and prices to: Richard G. Bance, 7616 Hollywood Blvd., #316, Los Angeles, CA 90046.

FOR SALE: Hemileuca hera magnifica [papered]. An elegant, large, black and white member of the Hemileuca family, a must to fill out your collection of Hemileuca. SASE please. Also I may have ova of Rothschildia cineta [wild collected Mexican cocoons], and A. polyphemus oculate [N.M. variety], A. pamina, A. zephyria, A. io neomexicana, and H. gloveri. Jim Coleman, 5812 Leta Rd. N.E., Albuquerque, New Mexico 87107 U.S.A.

WANTED TO BUY-One A1 Thysania agrippina, one A1 pair Coscinocera hercules, and one A1 pair Atacus imperator. Also want to buy any ova and cocoons of Saturniidae and Sphingidae. Send prices and availability list to Michael Benton, 3 Todd Drive, Brunswick, Georgia 31520. Ph. (912) 681-2245.

FOR SALE OR TRADE: Cocoons of A. polyphemus, S. cynthia and H. cecropia. FOR SALE: 1987 ova of C. angulifera, H. cecropia, A. luna, S. cynthia, P. modesta, D. inscripta, and other eastern moths (USA). Papered Lepidoptera and Coleoptera of PA., USA. WANTED - Exchange of beetles from the eastern USA for the coleoptera in your geographical region. Offers and inquiries invited. SASE Jeff Frey 364 Oaklyn Road, Lebanon, PA. 17042.

WANTED: To buy--pupae and/or eggs of Euploea or Amauris, preferably E. core and A. ochlea, for rearing. Please send available quantity and price. Write to Mary D. Cohen, Museum of Science, Humboldt Pkwy., Buffalo, NY 14211, USA.

FOR SALE: New Professional Quality, very compact, 12"X12"X18.5" 175 watt MV light trap, complete outfit, trap, ballast box, cord, legs, bulb, reasonably priced. Carrying case and collecting chamber also available plus numerous other proven designs and sizes from 60 to 2220 watts. Bus. size SASE. V.A. Brou, 137 Jack Loyd Rd., Abita Springs, La. 70420, Ph:(504) 892-8732.

WANTED: Overwintering pupae of Papilio cresphontes, P. glaucus canadensis, P. rutulus and P. eurymedon for 1986/87 or 1987/88 winter. A. R. Pittaway, 15 Beech Hall Road, London E49NJ, England.

FOR SALE OR EXCHANGE: Ova of A. pernyi, H. cecropia, C. angulifera, P. troilus, and a few others. ALSO, WANTED TO EXCHANGE ONLY: Ring of eggs of Hemileuca nevadensis. In return I would like ring of eggs of Hemileuca lucina or Hemileuca maia. Please reply to: Mark A. Howe, RR#1 Box 217, Lake Village, IN 46349.

FOR SALE or EXCHANGE: Cocoons and Pupae of A. io, C. juglandis, A. rubricunda, Calocala ova of cara, relecta, cerogama, habilis, vidua, piatrix and a few others. Reared A+ papered P. polyxenes asterius ♀ x P. bairdii fm brucei ♂ - ♂ only; P. rudkini ♀ x P. polyxenes asterius ♂ - ♂. WANTED, Butterflies, Catocala, Sphinx from Mid western and Western US and Canada. Ova, papered or pupae. Will trade same from my area or buy. Frank Bodnar, Box 52, Spring Church, PA 15686.

FOR SALE (or exchange for Arctic Palearctic butterflies); surplus specimens of choice species of butterflies from the Northwest Territories, Yukon Territory, and the Seward Peninsula of Alaska. Especially interested in Oeneis aello, elwesi, hora, mulla, polixenes, and norma. Write for list, Jim Troubridge, RR1 Cayuga, Ontario, Canada, N0A 1E0.

WANTED: U.S. Arctiidae from the following genera, Seiractia, Kodiosoma, Calidota, Carales and Neoarctia. Willing to buy or can trade for Utah Lepidoptera. Robert C. Mower, 378 North 650 E., Orem, UT 84057.

WANTED: Ithomiidae species from Central and S. America, but with good data only. Contact G. ten Broek, P.O. Box 39, Wormerveer 1520 AA, Holland.

FOR SALE: Cocoons of cecropia, cecropia-columbia cross, polyphemus, promethia and luna. Also, literature on lepidoptera and how to rear them. Send SASE for price list. Dr. G. E. Gregory, Star Route, Box 259, Orland, Maine 04472.

FOR SALE: Berge-Heinemann, Berge's Schmetterlings Buch. 1883, 231 pages, 50 plates, 49 hand colored. This item is being sold for the widow of a professional friend and the price is firm at \$500.00 U.S. funds. Contact Jon H. Shepard, RR #2, Sproule Cr. Rd., Nelson, B.C. V1L 5P5, Canada.

WANTED TO EXCHANGE: 20-40 Philosamia cynthia furnished in exchange for cocoons and/or ova (ova after May 1, 1987 only) of Calosamia angulifera. Will accept mixture of C. angulifera and C. promethea. Also will exchange for Hyalophora cecropia, H. gloveri and H. euryalis. Tor Hansen, Box 775, No Truro, MA 02652.

FOR SALE: Papered Wisconsin Spingids, Catocala and Apantesis. SASE for list. George F. Holbach, Route 1, Adell, WI 53001.

FOR SALE: The following pupae in large and small quantities - Papilio glaucus, Philosamia cynthia, Actias luna, Hyloicus drupiferarum, H. kalmiae, Smerinthus jamaicensis, Lepara bombycoides. Send SASE for prices. William Houtz, Route 4, Box 477, Pine Grove, PA 17963

FOR SALE: JOURNAL of the Lepidopterists' Society, Volumes 20-39 (1966-1985). Best offer. Bill Wright, 18 Clinton Place, Woodcliff, New Jersey 07675

MEMBERS' COMMERCIAL NOTICES.....

JOHN TROTTER 11 Laurel Way, London N20 8HR UK. FOR SALE: Ova of UK species, Emperor moth, Oak eggar, Garden tiger, Wood tiger, Elephant Hawk, Puss moth, etc or will exchange for american Silk moth/Swallowtail ova in season. ALSO FOR SALE: Out of print and rare Entomology Books esp lepidoptera. Catalogue available on request.

JORIS A. BRINCKERHOFF, Apdo 323, 6150 Santa Ana, COSTA RICA. Because of graduate school, must leave butterfly farm with competent and enthusiastic management. Looking for buyer or manager. The farm has a fully established infrastructure and guaranteed market, is legally recognized, possesses a government export contract and is solidly profitable. Please write for further information.

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DEADLINES: Material for the Jan/Feb issue should reach the NEWS EDITOR by Dec 1 of the previous year, and that for the Mar/Apr issue by Feb 15, for the May/June issue by Apr 1 and for the July/Aug issue by May 1, the Sept/Oct issue by Aug 15 and the Nov/Dec issue by Oct 15. Reports for the SEASON SUMMARY must reach the ZONE COORDINATORS listed on the front cover no later than the 5th of January. NEWS EDITOR is June Preston, 832 Sunset Dr, Lawrence, KS 66044, USA. RIPPLES EDITOR is Jo Brewer, 257 Common St, Dedham, MA 02026, USA.

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INFORMATION ABOUT THE SOCIETY.....

Membership in the Lepidopterists' Society is open to all persons interested in any aspect of Lepidopterology. Prospective members should send the TREASURER, James P. Tuttle, 3838 Fernleigh Ave, Troy, Michigan 48083, the full dues for the current year, \$25.00 US, together with mailing address and a note about areas of interest in the Lepidoptera; student membership (must be certified) \$15; sustaining membership \$35; life membership \$350. Remittances must be in US dollars, payable to the Lepidopterists' Society. All members will receive the JOURNAL (published quarterly) and the NEWS (published bimonthly). A biennial membership directory will comprise the last issue of the NEWS in even-numbered years.

Changes of address (permanent ones only), Additions or Changes in Telephone Numbers or Areas of Interest and Information about Mailing List Rental: Contact the ASSISTANT SECRETARY, Julian P. Donahue, Natural History Museum of Los Angeles County, 900 Exposition Blvd, Los Angeles, California 90007, USA.

Information on Membership and other aspects of the Society must be obtained from the SECRETARY, Dr. Richard A. Arnold, 50 Cleaveland Rd, #3, Pleasant Hill, California 94523, USA.

Requests for Missed Issues (i.e. those not delivered although dues have been paid on time) should be sent to the TREASURER, James P. Tuttle, address above, or the PUBLICATIONS COORDINATOR, Ron Leuschner, address below. Defective issues will also be replaced by the TREASURER. Do not request these of the NEWS editor.

Manuscripts submitted for publication in the JOURNAL are to be sent to Dr. William E. Miller, EDITOR, JOURNAL of the Lepidopterists' Society, Department of Entomology, University of Minnesota, St. Paul, Minnesota 55108, USA. See the inside back cover of a recent issue of the JOURNAL for editorial policies.

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AVAILABLE PUBLICATIONS OF THE SOCIETY..... Order from the PUBLICATIONS COORDINATOR, Ron Leuschner, 1900 John St., Manhattan Beach, CA 90266, USA.

CATALOGUE/CHECKLIST OF THE BUTTERFLIES OF AMERICA NORTH OF MEXICO (Memoir No. 2), Lee D. Miller & F. Martin Brown: includes references to original descriptions and location of type specimens. Members and subscribers, \$10 cloth, \$5 paper; non-members, \$17 cloth, \$8.50 paper, postpaid.

COMMEMORATIVE VOLUME, 1947-1972: a 25-year review of the Society's organization, personnel, and activities; biographical sketches; JOURNAL 25-year cumulative index by author, subject, and taxon; clothbound. Members and subscribers, \$6; non-members, \$10, postpaid.

1984 MEMBERSHIP DIRECTORY (current to November 1984). Biennial directory of members and their addresses, with geographic and interest indices. Not available for commercial use. (NEWS #6 for 1984). \$5.00 postpaid.

BACK ISSUES of the JOURNAL and of the NEWS of the Lepidopterists' Society. For a list of the available issues and their cost, postpaid, send a SASE to the SECRETARY or to the PUBLICATIONS COORDINATOR.