

Editorial Committee of the NEWS

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NEW EDITOR OF THE NEWS APPOINTED

As announced in the last issue of the News, Dr. Tilden wished to finish his term as Editor of the News following completion of the Season Summary issue (No. 4) of 1964. After unanimous nomination by the Society's new Editorial Board, the Society's Executive Council has appointed as Dr. Tilden's successor ERVAL JACKSON NEWCOMER for the three year term beginning 1 June 1964.

E. J. Newcomer was born in Oregon, Illinois in 1890. He received his A.B. from Stanford University in 1911, and attended the Graduate School there. He joined the U.S. Dept. of Agriculture, Bureau of Entomology and Plant Quarantine, in 1914, and continued in that service as Entomologist, specializing in insect pests of deciduous fruits, until he reached the retirement age in 1955. Since then he has been very active with Lepidoptera field work in the Northwest, as shown by his several recent articles in the Journal, and he has been serving on the Editorial Committee of the News and as Coordinator for the Pacific Northwest for the annual Season Summary. His extensive editorial experience includes editing the recent Proceedings of the Washington State Horticultural Society, a large annual volume.

Dr. Tilden, serving since 1959 as the first Editor of the News, has been outstandingly successful in establishing this periodical, as specified in the original proposal (Lepid. News 12: p. 157; 1959), "economically multilithed, of 2 to 4 pages (sometimes more if desired), coming out every six weeks and containing material of great immediate interest but not requiring permanent record." A special feature of his editorship has been the re-establishment of the annual Season Summary, the 1963 version of which occupies most of the current issue. The News has been distinctively his product.

C. L. Remington, Chairman, Editorial Board

The retiring Editor wishes to thank the many members who have served as committee men, as well as those who have contributed items for the NEWS. He also takes this opportunity to wish the incoming Editor every success.

J. W. T.

OFFICERS FOR 1964

- President - J. G. Franclemont (Ithaca, N.Y., U.S.A.)
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- W. H. Lange, Jr. (Davis, Calif., U.S.A.)

NEW BY-LAW ADOPTED

"The fee for Life Membership in the Society shall be \$125., payable in one sum. Life Members shall have all of the privileges of Active and Sustaining Members as long as they live. Previous dues paid for Active or Sustaining Membership shall not be subtractable from the full \$125. fee."

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NEW MEMBERSHIP LIST TO APPEAR

A new list of members is being prepared now. Members are asked to inform the secretary (J. C. Downey) of any changes they might wish in their listing. Interests and addresses may have changed since the 1962 list.

The Bayerischer Entomologentag, under the auspices of the Munchner Entomologische Gesellschaft, was held 3-5 April 1964 in Munchen, Germany.

The Internationale Entomologische Verein and the Verein fur Insektenkunde of Hannover jointly sponsored an Insect Display and Exchange Session held at Hannover, Germany, 22 March 1964.

Mitteilungsblatt fur Insektenkunde. Urania-Verlag, Verlag fur popularwissenschaftliche Literatur, Leipzig, Jena, Berlin, Germany. Since 1957 this periodical has developed from a mimeographed quarterly to a printed bimonthly. It is the main organ for publishing the results of observations on migrating Lepidoptera in East Germany. Numerous papers on Lepidoptera appear. Those reading German will find this an interesting and useful publication. (notice sent in by J. C. E. Riotte, Toronto, Ontario, Canada)

Dr. E. Yale Dawson has been appointed Director of the Natural History Museum in Balboa Park, San Diego. A specialist in marine algae, Dr. Dawson was once an active lepidopterist and still keeps up this interest.

Dr. John A. Comstock has been appointed Research Associate in Entomology of the Los Angeles County Museum. He was formerly head of the Division of Science of that institution. At present he is a member of the Board of Directors of the Natural History Museum of San Diego.

NORTH AMERICAN SEASON SUMMARY FOR 1963

ZONE I: CALIFORNIA, ARIZONA, NEVADA. Coordinator: Fred Thorne. Contributors: J. & T. Emmei, C. Henne, P. Herian, R. Holland, N. La Due, R. Langston, E. J. Newcomer, E. & S. Perkins, K. Roever, A. Rubbert, O. Shields and J. W. Tilden.

CALIFORNIA: In the south spring flights were normal to late on upper deserts, normal in summer, prolonged in fall in coastal and desert areas. In Central California earlier in spring and normal thereafter. Good rainfall increased numbers of species and individuals and summer rains in the deserts extended good collecting into December. Heavy August rains drowned some Agathymus stephensi larvae (Rubbert). Apodemia mormo langei close to extinction at type locality (La Due). MIGRATION: What appeared to be Erynnis zarucco funeralis observed flying 18° E. of N. along the beach north of San Diego, 27 March. Eleven counted passing a fifty foot strip in 15 minutes (Thorne). A minor migration of Vanessa cardui in a NNW direction from 25 Feb. to 25 March in San Diego County (Shields). A modest migration in the Mojave Desert early September to mid-December, with larvae subsequently on Boraginaceae (Henne). Libytheana bachmanii migrated into San Diego County in September. Roever makes the unusual report of an easterly movement of this species from California into Arizona near Yuma, in September, flying as late as 4:00 to 7:00 P.M. Danaus plexippus seemed to have a good year but no significant observations were submitted. This species overwintered in about usual numbers at the usual places.

STATE AND COUNTY RECORDS: State records - Yvretta carus, along Colorado River, San Bernardino Co., 7 September; Nastra neamathla, along Colorado River, Imperial Co., 3 October, with Papilio cresphontes (previous larval records, Redlands, San Bernardino Co., and Orange Cove, Tulare Co., 1961). Also Phoebis agarithe, in mountains of Eastern San Bernardino Co., and two undescribed Agathymus (all Roever). Los Angeles Co.: Incisalia eryphon, in Abies concolor association, 7200', San Gabriel Mts., 18 June (Henne). Stanislaus Co.: Annaphila arvalis, Ganistica, depicta, divinula, Del Puente Canyon, 23 Feb.-3 April (Langston). Mono Co.: Phyciodes orseis, S.W. of Lee Vining, 4 July (Perkins). Sacramento Co.: Strymon auretteorum, Hgwy. 16 at Cosumnes River Bridge, 10 June (La Due).

CHOICE SPECIES: Melittia gloriosa, 2 mi. E. of Anza, Riverside Co., 15 July (Langston); Oncocnemis chandleri, Blue Ridge, 5500', Los Angeles Co., 8 October; O. chorda, New York Mts., San Bernardino Co., 8 Oct.; Saturnia albofasciata, S. W. of Valyermo, Los Angeles Co., 28-31 October (Henne); Saturnia walterorum, Dictionary Hill, San Diego Co., 21 March (Thorne); Pan-oguina p. errans, all stages, July, Solano Beach, San Diego Co. (Langston). Ochlodes yuma, Delta area, Sacramento Co., (La Due); Pyrgus scriptura, near Parker Dam, San Bernardino Co., 7 Sept. (Roever); Papilio indra pergamus, near Lakeside, San Diego Co., 13 March (early record) (Powell); Colias alexandra, 4 July, Mono Lake (Perkins); Mitoura johnsoni, Mariposa Co., late July - mid-August (Shields); Incisalia fotis, Providence Mts., San Bernardino Co., 13 April (Shields); Strymon auretteorum spadix, Palomar Mts., San Diego Co., 28 June, also Sandbergs, Los Angeles Co., 18 June, also Greenhorn Mts., Kern Co., 20 June (La Due). Callophrys lemberti, Carson Pass, Alpine Co., 4 July (La Due); Plebejus chlorina, Tejon Mts., 6 July and ditto, Tehachapi Mts., 9 July (La Due); Plebejus neurona, Kern County Park, near Tehachapi, Kern Co., 30 June (Perkins); Philotes mohave 12 Mi. S. W. Palm Desert, Riverside Co., 10-13 March (Langston); and ditto, Juniper Hills, Los Angeles Co., 22 April to 5 May (Henne); Philotes sp., near rita, 20 August - 5 Sept., Juniper Hills, L. A. Co., 3600' (Henne); Speyeria zerene behrensi, 29 June, near Duncan Mills, Sonoma Co. (La Due); Speyeria hydaspes viridicornis, Shirley Meadows, Greenhorn Mts., 7 July (Rubbert).

GOOD COLLECTING SPOT: Golden Trout Area, Fresno County, 11-17 August. Many choice species including Callophrys lemberti, Hesperia meriamae and Colias behrii (Shields).

LIFE HISTORY OBSERVATIONS: Philotes sp., near rita, reared on Eriogonum plumatella, at Juniper Hills, Los Angeles Co.; Annaphila spila on Linanthus montanus and A. depicta on Nemophila pulchella, Tulare County (all Henne).

ARIZONA: The spring season was dry, and although Anthocaris pima was abundant 22-24 February on Mt. Mountain, Tucson, the season was generally off. Summer flights were delayed somewhat. Fall flights were on time, but while good for some species, were poor for many. No migrations or new records reported.

CHOICE SPECIES: Agathymus aryxna abundant Box Canyon, Santa Rita Mts., 13 October (Thorne); Stinga morrisoni, White Mts., 13 June (Shields); Hesperia susanae, White Mts., 17-19 June (Tilden); Neophasia terlootii, Chiricahua Mts., 6500', 17 June (Shields) and ditto, Santa Rita Mts., 12 October (Thorne); Emesis zela abundant in Oak Creek Canyon in June (Thorne); Strymon ines at Sells, Pima Co., 4 October (Tilden) and at Madera Canyon, Santa Rita Mts., 12 October (Thorne); Paramacera xicaque, Rustler Park, Chiricahua Mts., 17 June (Shields); Oeneis alberta daura, Schults Pass, San Francisco Mts., 1 & 12 June (Roever & Thorne).

GOOD COLLECTING SPOT: Schults Pass, 7800', 7 mi. N.W. of Flagstaff, 1-15 June, many choice species at moisture (Roever & Thorne).

NEVADA: Flight periods appeared normal. No unusual climatic events reported. No migrations observed.

APPARENT NEW NEVADA RECORDS: Anthocaris sara browningi, Euchloe ausonides coloradensis, Colias alexandra emilia, Pieris napi pallidissima, Speyeria atlantis near irene, Phyciodes mylitta mata, all Jarbidge Mts., Elko Co., 11-14 July and 1-4 August (all Herlan); Papilio indra near fordi, Clark Mts., 29 June; Libytheana bachmanii, Mtn. Springs Pass, 30 June; Apodemia palmerii, Coon Creek, 1 Sept.; Atrytonopsis python, Pine Creek Canyon, 30 June, all Clark Co. (all Roever). New county record: Ochlodes yuma, Elko Co., Jarbidge Mts. (Herlan).

CHOICE SPECIES: Speyeria zerene carolae, 29 June, Charleston Park & Tittle Falls; Erynnis telemachus, Kyle Canyon, 29 June, both Clark Co., (Roever); Papilio indra, Kinsbury Canyon, Douglas Co., Cercyonis ariane stephensi, early August, Carson Valley (Herlan), ditto Flannigan, Washoe Co., 18 August, (Holland).

GOOD COLLECTING SPOT: Jarbidge Mts., 100 mi. N. of Elko. See dates above.

ZONE II: PACIFIC NORTHWEST - BRITISH COLUMBIA, WASHINGTON, OREGON, IDAHO, MONTANA.

Coordinator: E. J. Newcomer, Contributors: D. Carney, W. C. Cook, E. J. Dornfeld, J. W. Goosey, Jr., R. Guppy, J. Manning, D. W. McCorkle, R. E. Miller, C. W. Nelson, E. J. Newcomer, B. & S. Perkins, W. Rogers, J. Shepard, and R. E. Woodley.

FLIGHT SEASON AND WEATHER: Lack of snow cover in mid-January when subzero temperatures occurred in Oregon and Washington resulted in reduced populations of some species. Early season cool, but hot spell June 10-18 partially made up for this. July cooler than usual with much cloudy weather to the 26th; late summer species delayed. August normal. Season late in British Columbia with excessive rainfall on south Vancouver Island in July, causing delayed flights. Season normal in Idaho. Central Montana delayed by excessive rain until July 1, after that dry.

BRITISH COLUMBIA: Guppy reported Incisalia mossi coming back. Nocturnal species scarce, including pest species Hyphantria textor and Malacosoma pluviale. Oporinia autumnata delayed to October instead of September; Oporophtera occidentalis to December rather than November. Woodley took Colias hecla and Erebia rossi gabrieli at Watson Lake, Yukon Territory.

WASHINGTON! Woodley took Lycaena editha in the Blue Mts., apparently the first time reported from that area since Tilden (1957). He also reports Limenitis bredowii from Vancouver Wash. (new state record?). McCorkle found Boloria selene in a small sphagnum bog a few miles from Yakima, and Newcomer found that it has three broods there. Rogers reported second brood of this species in Okanogan Co. McCorkle got Pyrgus centaureae on Windy Peak, and Shepard et al found Oeneis beani fairly common on Slate Peak, both Okanogan County. McCorkle found a colony of Callophrys johnsoni on U. S. 410 east of Enumclaw, Pierce Co.; Speyeria and Chlosyne scarcer this year. Newcomer found Callophrys spp. abundant in lower Yakima Valley and near Satus Pass. Cook reported moths about average at Walla Walla; Miller found them abundant at Dayton. These species numerous: Platyperigea extima; Euxoa olivia; Rhynchagrotis exsertistigma, Anagrapha falcifera, Amathes C-nigrum, Leucania farcta, Lacinopolia stricta and Abagrotis erratica.

OREGON: The Perkins brothers found an odd-year colony of Oeneis nevadensis near Rowena, Wasco Co. This species also occurs there in even years, indicating two separate two-year broods. Nelson reported odd-year colonies about 15 mi. south of The Dalles, at Saddle Mountain, Clatsop Co., and near Santiam Pass. Newcomer took stray individuals in Linn and Lake Counties, and found a colony on Modoc Co., California, just south of the Oregon boundary.

Newcomer took several Neominois ridingsi on Drake Peak, Lake Co., 8000', August 3, new record for Oregon and again found Pholisora (libya?) and Cercyonis ariane stephensi at Ana Springs, Lake Co., late in July. Lycaena h. gravenotata was taken at Juniper Flat, Wasco Co., in June. Plebejus argyrognomon ricei numerous 28 July and 4 August at type locality, near Cultus Lake, Deschutes Co. Crowe reported taking nearly 75 species of butterflies in eastern Oregon, including Speyeria m. artonis and Satyrium sylvinus at Fish Lake, and Speyeria m. eurynome at Silvies and Hines, all in Harney Co. (The variation in Speyeria in Oregon is classic; without wishing to change the determinations without access to the specimens, the editor suggests that the Speyeria mormonia of Harney County should prove a worthwhile study. -Ed.)

Nelson took 68 species of moths during a warm spell on February 23, 8 mi. W. of Mill City, Marion Co., including Xylomiges perlubens, Eupithecia spp., Hydriomena spp., Nemoria sp., Euphyia centrostrigaria, Triphosa haesitata, Xanthorhoe defensaria, Lithophane spp., Xylena cineritia, Rusina bicolorago, and Apamea castanea. Cook had good collecting on Santiam Pass in early September; near Sumpter, Baker Co., and in Jordan Valley, Malheur Co. A series of Amphipoea senilis taken at the latter place, and one specimen of Euxoa herrietta at Grass Valley, Sherman Co., 2 Sept., are new state records.

IDAHO: Butterflies are reported making a comeback in the areas where forest fires occurred in 1961.

ZONE III: ROCKY MOUNTAIN AREA - ALBERTA, WYOMING, UTAH, COLORADO, and NEW MEXICO. Coordinator: Donald Eff. Contributors: John Legge, B. & S. Perkins, J. F. & T. C. Emmel, R. Holland, K. Tidwell, M. Toliver, S. Ellis, A. M. Shapiro, T. R. Manley, L. Snyder & W. Howe. Only one Colorado resident reported. The response from transient collectors, especially for New Mexico, is gratifying.

FLIGHT PERIODS AND WEATHER: Total picture indicates conditions slightly subnormal. There was inclement weather in Alberta in July, and dry conditions in the central Rockies. 1962 was one of the driest years on record, followed by bitter cold in January, little snow until late February, and only 2 1/2" of moisture up to mid-May, drought in July, and sub-standard moisture for 1963, in general. For example, April and May, normally the wettest months, had only 0.05 inch moisture. If the growing season begins in this manner it affects the entire summer.

ALBERTA: Many species which were relatively abundant in 1962 (Oeneis alberta, Euphydryas editha beani, Boloria astarte, Papilio nitra, etc.), suffered a regression, although in some instances this might be attributed to the rainy, cloudy, windy and cool weather during July, which gave little chance to determine the numbers of many species. Eff was in Alberta in July, enduring the unfavorable weather. He collected in the newly opened Rogers Pass area of the Canadian Glacier National Park. This dreamed-of locality was a bitter disappointment, nearly devoid of butterflies. Only two specimens were taken along the Illecillewaet River - one Speyeria hydaspes and one Limenitis lorquini. John Legge searched for Boloria andersoni in the Mt. Revelstoke area, but in vain. Information from Alberta is sketchy this year. The biggest news is the discovery of Boloria alberta approximately 150 miles south of the previously known southern limit. Richard Holland, Cambridge, Mass., was in Banff National Park in early September, too late for anything but Nymphalis and Polygona.

WYOMING: Only B. & S. Perkins and Eff and Moeck reporting. The Perkins collected Teton County in mid-July, Fremont Co. July 18. Eff stopped on Togwotee Pass July 30, and with Moeck collected the Sierra Madre Mts. west of Encampment, Carbon Co., July 31. Captures were about as to be expected: Coenonympha haydeni (common), Phyciodes campestris, Speyeria mormonia. Of much greater interest were: from Teton Pass, Euphydryas anicia windi, E. editha montanus, and Boloria kriemhild. The Perkins also took B. kriemhild on Togwotee Pass, southwest of Lander in the Wind River Mts., they found Speyeria e. mcDunnoughi, S. atlantis nr. tetonia, and of special interest, Callipsyche behrii and Satyrium fuliginosum. Eff also reports these two species from the Sierra Madre Mts., for the first time. This little-known area is also the only known Wyoming locality for Speyeria cybele charlottei, where it occurs consistently but in small numbers.

UTAH: Aside from the resident collector, Tidwell, the Perkinses and the Emmels collected briefly in Utah. Tidwell reports his best collecting from Leidy Peak in the Uintah Mts., finding many of the alpine species associated with Colorado: Colias meadi, Agriades glandon rustica, Erebia magdalena & callias, Pyrgus centaureae, etc. He also explored the Raft River Mts. in the northwest corner of the state, in late July. Here he found Speyeria zerene cynna (range extension), Plebejus shasta (a most interesting record) and a number of other good takes. Also at St. George, Washington Co., he took Chlosyne lacinia, Hemiargus gyas, Leptotes marina, Lerodea eufala, Apodemia palmeri and Pholisora catullus. (No authentic list of Utah butterflies exists, but it is almost certain that some new state records must be involved here. Ed.) Lycaena cupreus, reported from Logan Canyon, Cache County, is a new state record, as is Chlosyne damoetas, July 30, Murdock Mt., Duchesne County. Another species of Pholisora (libya or lena?) is also reported from St. George, late July. At Silver Lake, Wasatch Co., the Perkins took Lycaena rubidus, nivalis, and Pieris napi pallidissima. At Midway Summit, Hwy. 14, Iron Co., the Emmels took Speyeria atlantis, mormonia, & coronis, Vanessa carye and cardui. Utah holds many surprises for the collector, as shown by the records of Tidwell in recent years. This year's news is the discovery of Pholisora lena, which interestingly has turned up in western Colorado also. Also the capture of what has been tentatively identified as Euphydryas morandi, June 16, La Sal Mts., of southeastern Utah. E. morandi was described from Charleston Mts., Nevada. In addition to the present specimens from Utah, the University of Colorado has a series taken as War God Springs, Mt. Navajo, Utah, leg. Burdick.

COLORADO: Resident reports from Ellis & Eff, other reports from Howe, the Perkins, the Emmels, Shapiro and Snyder. Ellis continues to take interesting species in western Colorado. This year Pholisora lena was a new record for him. Chlosyne acasta was found 1 mi. from Hotchkiss, Delta Co., and on Coal Creek, Gunnison Co., collecting was excellent, including Speyeria callippe, atlantis, cybele charlottei, aphrodite byblis, Strymon falacer, liparops, sylinus, titus, acadica, and Amblyscirtes vialis. A new locality for S. c. charlottei was found, Owl Creek in Ouray Co. Ellis also recorded Atlides halesus, sparingly wherever mistletoe has invaded pinons. Howe and Morey collected the Gunnison area two weeks in July, noted the area less productive than in 1962. Even higher elevations were dry and Speyeria scarce. A good capture was Plebejus argyrognomon sublivens. Interesting moths were taken at Ohio, 8700'. On columbine at dusk, Sphinx vancouverensis albescens; at black light, Coloradia pandora, Turuptiana permiculata, Epiplatymetra coloradaris, Apatela fragilis & Pheosia dimidiata. Higher up the day flyers Lycomorpha grotei and Parasemia plantaginis were taken. They took Pseudohazis eglanterina and one Eurema nicippe at Marshall Pass, Saguache Co. The Perkinses found only ordinary things at Red Mt. Pass and Coal Bank Hill, July 22. G. Austin, of Las Vegas, Nevada, had good collecting on the western slope, obtaining over 1000 specimens representing 45 species, during the last two weeks of July, while with the Arctic Alpine and Research Program. Eff was late for Papilio indra minori, and also encountered two days of dust storms. The Emmels searched the area for larvae, finding 5 on Lomatium eastwoodae, but all were lost eventually, and the eggs obtained from a shipped female proved sterile. They also collected Pinon Mesa, taking many specimens but no records. In Morefield Canyon, Mesa Verde National Park, July 23, they took Papilio multicaudatus (late!), Lycaena arota, Pieris beckerii, Phaedrotus piasus (late!), Nathalis iole, Plebejus melissa, & acmon, and others, including Hypaurotis crysalus, which continues to be found on the western slope but seems not to have been taken on the eastern slope in recent years. Ellis took Oeneis oslari (previously known only from South Park) in Middle Park in 1962. Eff and son Jim confirmed this extension in 1963, taking 40 specimens. Collecting was poor in spring on the eastern slope, because of dryness. Eff found collecting mediocre up to the end of June except for the return of Speyeria callippe meadi after several years' absence. Boloria freija was in good numbers in Caribou Bog, late May; Jae found B. frigga sagata, same locality, slightly later. The Perkinses collected Mt. Evans and Berthoud Pass, Clear Creek Co., in July, taking Parnassius smintheus, Oeneis lucilla, Euphydryas anicia brucei, Lycaena cupreus snowi, Colias meadi, and other normal alpine material. Also taken were some of the peculiar brucei-like Erebia epipsodea found at Loveland Pass. Shapiro and Snyder took many of the same species in August near the University of Colorado Science Lodge Mountain Research Station, at the foot of Niwot Ridge, Boulder Co. The most unusual capture was a fresh female Euptoieta claudia.

NEW MEXICO: Coverage of this state is better than usual but concentrated in the Albuquerque area. Resident M. Toliver notes spring season normal to two weeks late for some species; summer conditions dry but emergences about normal. Shapiro and Manley noted large numbers of Nymphalis antiopa larvae in early May. Toliver notes that flies of the family Tachinidae had an adverse effect on Vanessa cardui, carye and on Nymphalis antiopa. Danaus plexippus, D. gilippus, Papilio polyxenes and multicaudatus were more common than usual and Speyeria atlantis dorothea was especially abundant, fairly swarming in the Sandia Mts., reports O. D. Spencer. The Emmels note the abundance of dorothea, first emerging June 15 and still flying 3 August. Euptoieta claudia was common. Sandia macfarlandi was scarce or else missed by all collectors, only worn specimens taken by the Emmels June 14. Shapiro and Manley took most of the commoner species, but also Atrytonopsis vierecki, Megathymus texana (on Yucca angustissima), and what may be an area record in Zestusa dorus. They also did well with moths: Dictyosoma elsa, Celerio lineata, Phlegethontius quinquemaculatus, Syneda howlandi, Cirrhobolina mexicana and deducta, Nycterophaeta luna, Copablepharon grandis, Scotogramma trifolii, Trichoclea antica, Chrizogrotis introferens and inconcinna, Hadena semilunata and auranticolor, Heliophila albilinea, Copicucullia propinqua, Heliothis zea, Groteilla dis, Tarache tenuicola, Acontia angustipennis, and many others. They also collected in the vicinity of Chimayo and Taos. Holland sampled the Gila Cliff Dwellings National Monument area, Catron Co., and Silvery City, Grant Co. Toliver collected the El Vado Ranch in northwest New Mexico and at the Windsor Creek Campground, Cowles, N.M., but none of these areas produced records.

ZONE IV: GREAT PLAINS ~ CANADA TO TEXAS IN THE PLAINS REGION. Coordinator: H. A. Freeman. Contributors: W. Boscoe, H. A. Freeman, E. A. Froemel, R. Heitzman, R. Holland, K. Johnson, D. R. Love, C. S. Quelch, R. Stewart & J. W. Tilden. Coverage better than at any time during past 10 years.

GENERAL CONDITIONS: Most contributors indicate collecting average or below normal, due either to cold spring or summer drought, with the latter prevailing over the southern part of the Zone.

MANITOBA: Quelch reports fair spring collecting, summer poor and fall negligible. Weather records for the past ten years indicate weather is not a factor in this area in the abundance or absence of Lepidoptera. The spraying of insecticides in suburban and industrial areas is reducing collecting spots rapidly. (If weather is not a factor, what is? With full realization of the role of insecticides, the editor points out that populations have fluctuated long before insecticides were in such general use.) This year produced one of the largest migrations of Danaus plexippus on record, from July 17 to August 7, many specimens fresh. One of the best 1963 collecting spots was Riding Mountain National Park. During May, June and July were collected: Speyeria lais, atlantis and cybele, O. macounii, Papilio glaucus, machaon and nitra, Boloria frigga saga and titania grandis, Erebia discoidalis, Euchloe ausonides, Colias interior, eurytheme mayi, and Plebejus argyrognomon scudderi. Forty-five miles E. of Winnipeg at Sandilands many of the above appeared, plus Incisalia polios, augustinus & niphon, Limenitis arthemis, Coenonympha inornata and G. lygdamus. At Whiteshell, 100 miles east of Winnipeg in lake and bush country (Precambrian), collecting was as at Sandilands. At Pine Ridge, 15 miles NE of Winnipeg, collecting was fair May to August, including: P. glaucus, Oneis alberta, Boloria toddi & selene, Chlosyne harrisii hanhami, Speyeria lais, manitoba & cybele, Lycaena dorcas, Agriades glandon rustica, Hesperia uncas and manitoba, Celastrina a. marginata, & Plebejus melissa. Among the moths taken were: Celerio lineata, Darapsa pholus, Smerinthus jamaicensis & cerisyi, Paonias excaecata & myops, Sphinx gordius, Cressonia juglandis & Pachysphinx modesta. Holland, at Holland, Manitoba, reports Lycaena helloides, Pieris occidentalis and Colias eurytheme, September 12. On the same day at Junction of Hwys. 2 & 21, he took Nymphalis milberti as well.

SOUTH DAKOTA: Bethlehem, 4400', in Meade Co., center of the Black Hills, was quite wet in June, according to Boscoe; this was probably a factor in the great number of Lepidoptera present. Among these were: Sphinx perelegans & drupiferarum, Smerinthus cerisyi, Pholus achemon, Paonias myops, Celerio lineata, Hyalophora gloveri, Antheraea polyphemus, Coloradia pandora, Apantesis virgo, Papilio rutulus & zelicaon, Colias alexandra, philodice & eurytheme, Euchloe ausonides, Pieris sisymbrii, Coen. tullia, Cercyonis pegala, Oneis uhleri, Speyeria aphrodite,

cybele, edwardsii and atlantis, Chlosyne gorgone & nycteis, Phciodes tharos and campestris, Nymphalis antiopa and milberti, Vanessa cardui & atalanta, Limenitis weidemeyerii, Incisalia nippon & fotis, Lycaena phlaeas, helooides & doraas, Plebejus acmon, melissa & saepiolus, Clauc, lygdamus and Celastrina argiolus. July had some thunder showers but was very dry. August was completely dry; collecting was poor, but the following were taken in July and August and not in June: Catocala amatrix & stretchi, Neophasia menapia, Danaus plexippus, Euptoieta claudia, Cercyonis oeta & meadii, Nymphalis j-album, Polygonia zephyrus & Chryso-phanus titus. In addition, Nathalis iole, Pieris protodice, Eurema lisa & Lycaena thoe were taken at St. Onge, Lawrence Co., Jul@77-11, at about 3500'.

NEBRASKA: Johnson, reporting from Chadron, in the northwestern part of the state, is the first report from that area so no comparisons are possible with past years. Spring milder than normal, with increased numbers of S. melinus franki, Papilio polyxenes & zelicaon, Erynnis icelus and Pieris sisimbrii on the ridges. Early summer was very damp, with a resultant poor season. Speyeria edwardsii and aphrodite were reduced in numbers. Pieridae were scarce until late summer, and L. melissa and G. lygdamus were nearly absent. Late summer was more nearly normal with increased numbers of Melitaeinae, & Satyridae, esp. Euptychia cymela. E. comyntas valeriae was very common. New records for the area were: Atrytonopsis hianna, Euphyes vestris and Nymphalis j-album. Nathalis iole, Atalopedes campestris and Papilio multicaudatus came out in the fall. The best collecting spot was Monroe Canyon, Sioux Co., where Poanes taxiles was common in addition to many of the above species. Froemel, at Columbus, reports Asterocampa clyton, Limenitis Archippus and Astyanax, and Papilio cresphontes. He ran his moth traps much of the time during the summer, having success with Sphingidae and Catocala. He has taken C. abbreviatella this year and in 1962, but not previously. He hung the traps inside an old building and avoided damage to specimens on bad nights.

KANSAS: Heitzman reports that a cold winter with below normal temperatures and moderate snowfall was followed by the earliest spring in fifteen years. Temperatures in early April rose to 80°, with spring species three weeks early. Anthocaris genutia & Euchloe olympia and Incisalia henrici were abundant; Erynnis spp. were more numerous than last year. May and June were very good for butterflies. Euphydryas phaeton is coming back definitely; several colonies were located in Johnson and Douglas Counties. Speyeria cybele & idalia, Problema byssus & Strymon edwardsii were abundant again in their local habitats. Panhiades m-album was taken after several years' absence, but Eurystrymon ontario, Strymon liparops and caryaevorus were absent this year. All the southern migrants were abundant, producing several large broods during the summer and fall. Agraulis vanillae swarmed, and in many cases passion vines were completely stripped of their leaves by the larvae. Colias cesonia, Nathalis iole, Eurema lisa & nicippe and Junonia coenia were abundant. Most Papilio, esp. cresphontes, and Graphium marcellus, were scarce. So were Feniseca tarquinius, Asterocampa clyton and Lycaena phlaeas. Vanessa cardui became common in late Fall after being absent in the summer. Possibly a migration? Dry conditions in late summer and fall localized butterflies to small areas of flowers or moisture, but seemed to have no effect on numbers. The hot summer and very late hot fall (100° in October) caused many species to produce extra broods. Asterocampa, usually producing an incomplete third brood, has a distinct third brood resembling the spring brood in size and color. By contrast moth collecting was the poorest in years. Catocala and Sphingidae were scarce, with many species not taken at all. Catocala abbreviatella, abundant in virgin prairie last year, was rare. Only Catocala common were epione, palaeogama, minuta and amica. UV collecting was especially poor. The best night yielded but 10-15 sphingids; a year ago a good night produced 50-60 specimens. Noctuids were less common than for years. The only good moth collecting was early spring and in the fall, with choice migrants taken. Saturniidae were scarce. Anisota stfgma larvae were in numbers on Oaks in Johnson Co., July & early August. Arctiidae were uncommon, except Utetheisa bella, which was more numerous than in many years, though not abundant. Love, reporting from Wichita (reported through Alice Hopf), found the Monarch migration peaked September 21 & 22. The numbers seemed no more than 20% of the huge 1962 migration. There seemed to be more casual monarchs for several weeks before and after the peak than is usual. Some were still in evidence October 29.

NEW COUNTY RECORD: A fresh female Nastra l'herminieri, June 10, Douglas Co., in a virgin prairie meadow. There is only one other state record for this species.

TEXAS: Holland collected across Texas in early June, taking Eurema lisa and Everes comyntas at New Boston, Bowie Co.; Vanessa virginiensis at Lone Star, Upshur Co.; Nathalis iole at Hearne, Robertson Co.; Estigmene acraea at Mason, Mason Co.; and at Eldorado, Schleicher Co., Agraulis vanillae, Chlosyne lacinia, Eurema nicippe, Hemiargus isolus & Pieris protodice, all on June 5; west of Eldorado, same day, he took Danaus gilippus, Strymon melinus; at Santa Elena Canyon, June 6, Astercampa celtis, Pholisora catullus and Atalopedes campestris, and at Van Horn, Culberson Co., June 7, Pyrgus communis. R. Stewart, now in La Jolla, Calif., formerly of Ft. Worth, found Mitoura gryneus and Euchloe olympia at Ft. Worth in March. On the bluffs NE of Lake Worth Dam, in March, in Redbud thickets, he found Incisalia henrici turneri common; at Tyler State Park, March 17, Incis. hadros was common. Tilden reports conditions dry and collecting relatively poor in west Texas in late June. In south Texas in late October and early November he found it dry from west Texas to Rio Grande City until rains began in late October. Brownsville had more early rain and better collecting. During late October and early November a noticeable migration of Danaus plexippus, from at least Del Rio on the west, San Antonio and Corpus Christi on the north, and on to the Mexican border, the direction southerly. New records for Welder Wildlife Refuge (and so probably for San Patricio County) were: Panoquina panoquinoides (2-XI-63), Chiomara asychis (13-X-63), and Pyrgus philetas (13-X-63). Rare specimens collected were Dynamine dyonis, Brownsville, Cameron Co., 13-XI-63 (1, fair condition); Panoquina evansi, Brownsville, same date, (1, good); Panoquina sylvicola, Santa Ana WLR, 11-XI-63 (several). The best collecting spots Tilden found were Brownsville, Oct. 18-November 13, many species, with Chioides albofasciatus abundant, and Santa Ana WLR, Hidalgo Co., not good until after November 1, many species present. A few captures remain to be positively identified. H. A. Freeman found Incis. hadros common in March, Tyler State Park, with Hesperia metea licinus, Amblyscirtes alternata & vialis and Incis. henrici turneri. Several larvae of Megathymus y. reinthali were collected at Tyler State Park and at type locality (2 mi. w. of Ben Wheeler, Van Zandt Co.) Spring collecting at Dallas was about normal but Incis. h. turneri failed to appear. In Big Bend National Park, April, interesting species were collected including: Apodemia palmeri & mejicanus, Calphelis nemesis, Erynnis meridianus and Heliopetes domicella. Fifteen larvae of Megathymus violae were taken. Collecting in central Texas in June was extremely poor, due to drought. Louise, Gilbert and H. A. Freeman took a nice series of Calphelis rawsoni in Landa Park, near New Braunfels, Comal Co., with Systasea pulverulenta, Celotes nesusus, Nastra julia, Amblyscirtes celia, Copaeodes aurantiaca and minima, Erynnis horatius and Papilio cresphontes. Tilden took Papilio troilus in the same area, June 28. This is one of the most westerly localities for this species. Collecting in the San Antonio area during early summer was normal. Tilden found Hesperia viridis common just NW of San Antonio 10-11 October. Collecting in the Mission-McAllen area, Hidalgo Co., during the second week in July found species out in good numbers. Clench took several interesting hairstreaks in this area, especially in the Bentsen-Rio Grande State Park. From Del Rio to Langtry was very dry and hot in August, but larvae of the Agathymus mariae complex were taken, which emerged during September and October. It would seem that from all reports that collecting in Zone 4 was below normal for the most part. Rainfall was low in the southern half of the zone. A feature was the large migration of Monarchs in September and on into November, observed by Freeman in the Dallas area and by R. & C. Kendall and Tilden in south Texas.

No reports from other states.

ZONE V: CENTRAL REGION - MISSOURI TO WEST VIRGINIA, NORTH TO ONTARIO. Coordinator: J. R. Heitzman. Contributors: B. Babe, R. Bracher, M. Bristol, C. Covell, P. Hebert, R. Heitzman, A. M. Holmes, R. Holzman, Alice Hopf, L. L. Martin, M. C. Nielsen, J. Nordin, R. Royer, R. C. Robertson, J. Schrenk, & W. Sieker.

GENERAL CONDITIONS: Drought was general during mid-summer and autumn, affecting populations of Lepidoptera to some extent. Migration of Danaus plexippus while noted by some observers, was far less spectacular than in 1962. Winter temperatures were below normal but this seemed not to be a factor; some areas with severe winter conditions had excellent collecting.

MISSOURI: Winter temperatures were below normal, snow fall moderate, spring fully three weeks early. Butterflies swarmed the first week in April near Warsaw, Benton Co., Incis. henrici, Anth. genutia, Euchloe olympia, and Erynnis sp. It was another poor year for Papilio cresphontes and Graphium marcellus. Speyeria idalia, Agraulis vanillae, Colias cesonia,

Phoebis s. eubule and Amblyscirtes mysa were abundant. A. vanillae larvae defoliated Passion Vine. Euristrymon ontario, Strymon liparops & caryaevorus and Mitoura gryneus were absent this year, but Panthiades m-album returned after a 3-year absence.

UNUSUAL CAPTURES include an albina male Eurema lisa.

NEW RECORDS: for Jackson County, Phyciodes texana, Erynnis zarucco funeralis and Phoebis sennae marcellina, a single (stray) female. Drought conditions prevailed during mid-summer and congregated butterflies to local areas of flowers and moisture. Colias, Eurema, Phoebis, Polygonia, Libytheana, etc. were collected easily by soaking spots along an old railroad track with water and collecting the butterflies that gathered. Moth collectings were poor. UV lights were not as successful as in 1962. A few choice species were taken: Catocala serena, nebulosa, abbreviatella, amestris and ulalume, but most Catocala and sphingids were uncommon, as were Phalaenidae and Arctiidae. Late in the year migrant species, mostly noctuids, flooded the area and produced the best moth collecting of the season in late September and October. LARVAE REARED: Amblyscirtes nysa on Echinochloa pogens, Setaria glauca and Digitaria sanguinalis; Hesperia metea on Andropogon gerardi. Euphyes vestris on Cyperus esculentus; Euphyes dion on Carex lacustris; Problema byssus on Tripsacum dactyloides. (reported by Heitzman). Miss Harriet Howe, Springfield, made a count of Danaus plexippus between 23 September and 28 October, observing 319 total, 165 on peak day of 10 October.

KENTUCKY: Covell took Asterocampa celtis, 17 August at Harrods Creek, near Louisville. (only report for the state)

IOWA: Season about normal except for exceptionally warm fall. Royer reports that construction is destroying many good collecting spots in the Des Moines area. In Nine Eagles State Park, 10 August, Strymon melinus, Eurema lisa, Atrytone logan & Thorybes bathyllus were common. A small colony of Lycaena phlaeas was also present. Speyeria idalia & aphrodite females were abundant at Kaslow Prairie (virgin prairie) on 17 August. Small colonies of Lycaena helloides & thoe were discovered near Storm Lake on the same date. Edith Lyle of Phoenix, Ariz., noted a mass of migrating Danaus plexippus covering a tree in a field near Sioux City in September.

INDIANA: Bracher reports an early spring and dry summer were followed by a late fall. Winter was severe. Drought conditions in mid-summer and fall may have reduced populations. Many host plants were killed by the drought. Wholesale spraying of roadsides and railroad tracks with weed killers destroyed many good collecting spots. Butterflies were very scarce except for Danaus plexippus. Larvae of this species were found as late as 2 September, with adults emerging until 20 September.

MIGRATION: There was a Danaus plexippus migration 8-14 September. Thousands clustered on pine trees at Grander on 8-9-10 September, leaving by the 12th. Many specimens were tagged for the Ontario Museum. In one case a single sweep of the net yielded 55 specimens.

UNUSUAL CAPTURE: a nearly albinic male of Papilio glaucus was taken May 30 near Granger. Ground color almost white, and the bands brown instead of black. Overall, 1963 was one of worst seasons in 30 years of collecting by this reporter.

ILLINOIS: Robertson noted larger than usual numbers of Danaus plexippus larvae but few adults resulted and no mass movement was observed. There was a marked reduction in numbers of Catocala celia. A few C. grynea were taken. Bristol, reporting from Elgin area, notes that steadily extending real estate developments and use of insecticides are destroying good collecting areas. Chlosyne nycteis was unusually common in mid-July. Many Strymon calanus, edwardsii, and a few liparops strigosus were taken at Sumac flowers. Lycaena x. dione & Cercyonis pegala were less numerous. MIGRATION: Many D. plexippus were observed migrating southward on 5 October in the Elgin area. Larval host records: Paonias myops, wild cherry; Apatelodes torrefacta, cherry; Schinia trifascia, Eupatorium perfoliatum; Schinia marginata on Ambrosia artemisiifolia, Adita chionanthi on Triosteum perfoliatum. FLOWER PREFERENCE OF ADULTS: Rhodophora florida to Gaura sp.; Haemaris sp. to Monarda (Bergamot); Melittia cucurbitae to Apocynum sp.

OHIO: Winter temperatures reached record lows but spring was about normal, many species flying first week in May. Drought in mid-summer & fall reduced numbers and also apparently the size of some species, especially Colias. Urbanization and wholesale use of weed killers are destroying good collecting spots at an alarming rate. A general decline in numbers seems to be taking place with most species in Ohio. Erynnis juvenalis was very common, early May, in Findley State Park. Mason Creek area, Metropolitan Park System, Cuyahoga Co. yielded Pieris virginiensis (April), Erynnis icelus (May), Euphydryas phaeton (June, abundant) and several Poanes hobomok female form pochahontas. Many early Pieris rapae had very dark markings and a creamy ground color, possibly caused by the severe winter? GOOD COLLECTING SPOT: Oak Openings Park, Lucas Co., mid-August, where Liatris flowers were attracting many species. POPULATION FLUCTUATION: Vanessa cardui, absent in 1962, appeared in substantial numbers in 1963, September.

NEW RECORDS: Euptoieta claudia (18 August) and Euphyes dukesi (10 & 11 August) are new records for Lorain County. BEHAVIORAL NOTES: Martin reports a female Graphium marcellus laying not only on young Pawpaw trees but also on stems and blades of grass at the base of these trees, 27 July. In Findley Park 28 September between 1:45 & 4:45 P.M. a huge concentration of Colias Eurytheme & philodice was observed fluttering aimlessly about in an area of perhaps two acres on the back side of an earth-filled dam. An estimated 1700-2500 individuals were involved. Colias were not conspicuous in other parts of the park.

MINNESOTA: Nordin reports unusual heat in April with an early spring season, the rest of the year about normal. Euchloe olympia appeared 5 May, one or two weeks earlier than in 1962. Collecting in Koochiching Co. on 20 July yielded 27 species of butterflies. DISTRIBUTIONAL NOTE: Lycaena phlaeas seems to be establishing new colonies. Several such were discovered in Anoka and Sherburne Cos. 18 August - 1 September. One spot, collected every year from 1957 to 1961 has never yielded a specimen of this species but in 1963 a well-established colony was found.

NEW RECORD: Boloria eunomia taken 26 June in an acid bog is a new record for St. Louis County. Schrenk, in central Minnesota, found weather and collecting greatly improved over 1962. Colias eurytheme & philodice, Pieris rapae & protodice, Lethe portlandia, Coen. tullia, Boloria selene, Phyciodes tharos, Danaus plexippus, Nymphalis milberti & antiopa were common. Speyeria bybele and Strymon acadica, normally common, were scarce. Limenitis arthemis was flying on 23 June in increased numbers and a partial second brood was found in early August. One second brood specimen completely lacked the normal white band on the wings. Danaus plexippus was less numerous than in 1962. Many larvae were found in August. Moth collecting was good during summer but declined sharply in the fall. Saturniidae were scarce; Sphingidae and Catocala were up. Smerinthus geminatus & paonias excaecata were very common. A single Pachysphinx modesta was taken 20 June. Sugaring for Catocala was quite productive; C. illia, cerogama, concumbens & briseis. A surprising note is the capture of a fine C. briseis taken while "feasting" on a dead fish.

MIGRATION: The migration of Danaus plexippus peaked in early September.

MICHIGAN: One of the coldest winters of the century enveloped Michigan but an early thaw allowed a normal season start. Summer drought caused low water levels in lakes & marshes. Some dried completely; this may have a bad effect on marsh-inhabiting species. Nielsen, collecting from Lenawee Co. near the Ohio line into the Upper Peninsula, 6 May to 24 October, took 93 butterfly species and at least 200 species of moths. Nielsen & Newman found Boloria frigga & Oeneis jutta in an acid bog, 30 May, near Manistique, Schoolcraft Co. Many desirable moths were obtained here at bait. McAlpine found Libytheana bachmani unusually common near Grand Rapids, taking 11. Several southern species were taken late in the season, including Atalopedes campestris, Amyna octo and Alabama argillacea. A Vanessa cardui was taken 1 September, the first for many years. Pieris rapae populations continue to rise while P. protodice numbers decline. Perhaps a case of the immigrant gradually eliminating the native, or perhaps due to the increased use of insecticides. (Or perhaps normal fluctuation. Ed.) Danaus plexippus was abundant all season but no migration was observed. Two fresh Hemileuca maia males were taken October 5 in Jackson County, and Ted Ellis collected a Hyalophora columbia in Dickinson County, a new COUNTY RECORD and the first of this species in the Upper Peninsula.

OTHER RECORDS: Incisalia henrici, May 30, Manistique, Schoolcraft Co. A long series of Boloria eunomia dawsoni, 13-15 June, Mackinac and Chippewa Cos., NEW STATE RECORD. New Chippewa Co. records: Oeneis jutta, Anarta cordigera, Autographa microgamma. New Makinac Co. records: Polia tacoma, Acronicta quadrata & laetifica, Cerma cora & Cucullia intermedia. New Ingham Co. records: Herse cingulata, East Lansing; a MSU student captured this during the fall term; the second state record for the species. Papaipema marginidens, inquaesita, eupatorii & necopina, also new records. UNUSUAL CAPTURE: Neilsen and McAlpine took Oarisma powesheik 13 July near Grand Rapids, in the only known Michigan locality. LIFE HISTORY NOTE: Hylephila phyleus was observed ovipositing on Eragrostis hypnoides.

WISCONSIN: Holzman collecting in Vilas Co. from 18 June to 24 August noted very cool night temperatures until late July, with poor UV collecting. Only 12 species of sphingids were collected. Four species - Sphinx gordius, Smerinthus geminatus, Paonias excaecatus & Pachysphinx modesta - made up 68 of the 90 sphingid specimens taken during the entire summer. Few Catocala were taken and even noctuids were uncommon. Butterfly collecting was good but spotty. Best collecting was at flowers along County highways. Speyeria cybele, atlantis and aphrodite were common mid-July to mid-August. Locally common species were Lycaena phlaeas, Chrysophanus titus, Nymphalus j-album, Boloria selene & Lethe portlandia. Good catches were Limenitis arthemis, Feniseca tarquinius & Lycaena e. michiganensis (16 July in a bog). Sieker, in the Madison area, reports a dry season and a cool summer, the drought decreasing Lepidoptera populations. Still, many good species were taken. Libytheana bachmanii was taken, the third time in 30 years, and the first Mitoura gryneus in 20 years. Papilio were scarce except for the first brood of glaucus. Hesperidae were numerous, Speyeria numbers reduced. Nymphalis milberti was common in Door County. Colias spp. were abundant in the fall. Danaus plexippus was common in the spring, heavily parasitized, and scarce by autumn. Ten species of Sphingidae and 13 species of Catocala were taken. C. cerogama was very abundant, C. ilia quite scarce. Saturniidae taken included H. cecropia, A. io, Actias luna, Call. promethea & Anth. polyphemus. Apantesis virgo & virguncula were common Arctiidae. Geometridae and Notodontidae were down. Microlepidoptera were very abundant, seemingly not affected by the drought. UNUSUAL CAPTURE: A fine female of Sphinx vashti. NEW COUNTY RECORD: Catocala clintoni was taken in Door County for the first time.

ONTARIO: Hebert & Babe report a good year for moths except for August, which had heavy rainfall and low temperatures. Housing is beginning to encroach on good collecting areas. UV light was successful. Seventeen species of Sphingidae were taken including a melanic Smerinthus cerisyi with gray-black fore wings & a Smerinthus geminatus form tripartus. Twelve species of Catocala were taken including 3 melanic C. unijuga and an albinic C. crataegi with the usual orange and brown marking a dull white in places. Fresh C. nebulosa & concupens were taken 9-10 October, extremely late for this area. Anth. polyphemus was the only common saturniid. Anisota, Citheronia, and Actias luna were absent. A single Eacles imperialis was taken. Apantesis virgo was common. A. arge, persephone & radians were less so. Noctuidae were numerous. RARE SPECIES taken included Charadra deridens, & Euparthenos nubilis. Apatela were abundant. Hebert took a male Erebus odora flying during the afternoon, 29 September. The last known capture of this species in this area was in 1959. This was an excellent year for Notodontidae, with Pheosia rimosa, Notodonta stragula and Odontosia elegans being taken. Holmes found spring later than normal, butterflies uncommon in summer and a long warm fall. Sixteen species of butterflies were taken 17 May in Hastings Co., including Strymon melinus. This early capture may indicate the species is double-brooded in the Hastings area. Lycaeides melissa was abundant locally in Norfolk Co. near Simcoe. UNUSUAL CAPTURE: Mitoura gryneus, 9 June, Hastings County. RECORD: Incisalis henrici is a new record for Hastings Co., taken 17 May.

ZONE VI: SOUTHEAST - FLORIDA TO LOUISIANA, NORTH TO ARKANSAS AND MARYLAND. Coordinator: Bryant Mather. Contributors: C. V. Covell, Jr., H. A. Freeman, R. Holland, W. H. Howe, L. J. Paulissen, & C. F. Zeiger.

VIRGINIA: Covell reported the season was very dry, with possible exception of July & August. The drought was exceeded only by that of 1930 in this century. The effects cannot be evaluated due to inadequate bases for comparison. He collected in 7 counties, 4 of which

he has not previously worked. He took specimens of 37 species, none new to him. His earliest records were: C. argiolus 7 2, Price's Fork Road, Blacksburg, 2 April. Same locality, in cedar, 16 April, he took M. gryneus (9), C. argiolus, I. henrici, P. glaucus (2), A. genutia 12 1, Polygonia comma. His latest record was 18 October, Blacksburg, Vanessa cardui, fresh. (Covell's detailed field notes will be filed with the Society Library, as are other complete reports as available). Covell also reports the following moth: Phaeoura quernaria. (The Coordinator notes that this appears to be a new state record for Virginia. See fig. 13, Rindge, AMNH Bull. 123, 1961). Mather, Charlottesville, 9 April, took Phigalia titea, det. Rindge.

FLORIDA: Zeiger, reporting on the form, noted spring was late, summer and fall normal. Cold, on 12-13 Dec., 1962 had the effect of making all tropical species absent or very scarce. The use of vacant lots for home building and playgrounds destroyed numerous host plants. Mitoura gryneus was taken March through September at Ft. George, Duval Co. LIFE HISTORY NOTE: Calpodus ethlius reared on Thalia dealbata, 29 June. NEW FLORIDA AND UNITED STATES RECORD: Eurema chamberlaini, taken 30 March at Ross & Castello Hammock, Dade County, det. A. B. Klots and deposited in the Florida State Collection, Gainesville. Covell, 21-24 March, found nights cold and the effects of the winter frost evident on tropical plants down to Daytona Beach. Collecting from Ft. Lauderdale to Key Largo and in the Everglades fair for butterflies and for large-medium moths, good for micros. Species included, from Fort Lauderdale, E. atala, H. charitonius, A. vanillae, U. proteus; 10 mi. W. of Miami on Rt. 41, Lephelisca virginicensis, Phyc. phaon, Atrytone logan, Polites vibex, Oligoria maculata; Everglades, Rt. 94, P. troilus ilioneus, P. s. eubule, A. vanillae, Euptychia areolata, Euryfavonius, Strymon columella, Hemiargus t. bethunebakeri, Leptotes c. theonus, Asbolis capucinus, Euphyes palatka, Panoquina ocola, Polites vibex; Key Largo, B. cresphontes, A. vanillae, Phoebis agarithe, Appias drusilla, & monuste, H. charitonius, Dryas j. cillene, Eunica t. fatilista, Phocides pigmalion, Pyrgus oileus, Ephyriades brunnea, Wallengrenia otho, and the pericopid moth Composia fidelissima, Epargyreus zestos & Danaus plexippus. At Florida City, Nathalis iole, Anartia jatrophae, A. vanillae. At Guantanamo, Phyc. phaon, Calycopis cecrops, Atrytone logan, Hylephila phyleus and at Goodland, Phyciodes frisia plus some of the preceding.

GEORGIA: Mather in Atlanta and at Stone Mt., 12-13 October, recorded the following: D. plexippus, A. vanillae, P. tharos, E. claudia, V. virginicensis, Junonia coenia, Everes comyntas, C. eurytheme & philodice, Eurema lisa, Nathalis iole, Pieris rapae, Pyrgus communis, H. phyleus and Atalopedes campestris.

MISSISSIPPI: K. & B. Mather, assisted principally by M. E. Roshore, continued their survey of the Lepidoptera, concentrating especially on moths. It was their observation that many of the usually abundant larger moths were significantly scarcer than in previous years. However, in absence of accurate quantitative control data on "normal" years, it is concluded that no valid comments can be made relative to a departure therefrom for the present year. They also found it difficult to report soon after the close of a year on the material collected that year since they often find it takes a year or more to obtain confirmed determination of the materials collected and they prefer not to encumber the literature with records based on unconfirmed determinations. (Here the Editor suggests that important records of this nature are better reported as permanent papers in the JOURNAL than in the SUMMARY, which he supposes was intended primarily for the readily-organized normal collecting data.)

ARKANSAS: Gilbert and H. A. Freeman took a female Hesperia meskei on 12 June and located a fine colony of Lycaena phlaeas at Hope Hill Farm, Faulkner Co. Paulissen reported that after a late start, spring developed into one of the hottest and driest summers on record for NW Arkansas. Very warm temperatures continued into November. This, with lack of rain, brought beautiful fall days, extending the collecting season. Rainfall was about half normal. Butterfly collecting was good, especially in spring and fall. Conditions seemed ideal for certain species, whose numbers rose: Colias philodice, Nathalis iole, Phyciodes phaon, Speyeria cybele, Libytheana bachmanii, and Lycaena phlaeas. Other species were down - only one Feniseca tarquinius was taken and Atlides halesus was not seen. New records for NEW Arkansas were: In the spring, Euphydryas phaeton (many); Amblyscirtes

aesculapius, & samoset, & Strymon calanus; in the fall, Hemiargus isolus, Leptotes marina (both abundant), Brephidium exilis (9) & Phyciodes texana (3). UNUSUAL CAPTURE: Eurema mexicana, locally scarce, was taken in the fall. Among the moths, P. epimenis, A. octomaculata, Cat. epione & Erynnis domingonis appeared in more than usual numbers and Hyphantria cunea was again abundant. Tolyte vellea was still absent and various members of Apantesis were again not up to usual numbers. Dwarfs of several butterflies were noted: Eurema lisa, Pieris protodice, Colias eurytheme, Eurema nicippe, Strymon melinus and Junonia coenia. One Junonia was no larger than a melinus. It is thought the drought conditions accounted for these. Howe & Taylor found collecting good at Eureka Springs 28-30 September, despite extreme dryness. Wild Aster was in bloom, with Colias cesonia common. Forty specimens of the fall form (rosa) were taken each afternoon. Also present were Colias eurytheme, Nathalis iole, Eurema lisa & nicippe. Phoebis s. eubule was scarce. Battus philenor and Papilio polyxenes were worn. Anaea andria was fresh and numerous. Agraulis vanillae was common. Passion Vine was covered with the spiny larvae, in outbreak numbers. Junonia coenis was frequent. An occasional Calycopis cecrops was taken on Aster. Atalopedes campestris was common; Hesperia leonardus (all females) was scarce. One only Libytheana bachmanii was taken along a railroad track. Danaus plexippus was present but not in noteworthy numbers, their flight not directional. Phoebis s. eubule were noted flying southeastward, as they do in Kansas. Several moths were taken in Pine forest: a perfect female Apantesis intermedia flying in bright sunshine; a rare Panthea furcilla on a pine trunk. Only underwing was a female C. vidua. Larvae of Epantheria scribonia were seen searching for hibernation sites. Several were brought back to Kansas but died under cage conditions. Holland reports Hemaris diffinis, June 4, on Rt. 23 North of Ozark, Franklin County.

ZONE VII: NORTHEAST - PENNSYLVANIA TO MAINE AND QUEBEC. Coordinator: L. P. Grey. Contributors: R. Biskeborne, W. F. Boscoe, A. E. Brower, R. W. Cavanaugh, C. C. Curtis, G. Ehle, Alice Hopf, J. A. Keji, R. May, C. Oliver, C. N. Potter, A. M. Shapiro, J. E. Staples, M. Zappalanti.

FLIGHT PERIOD & SEASON: After the horrible winter of 1962, the summer seemed much better than normal, generally warm and sunny but with local dry & hot or wet & cold spells at critical flight times. Collecting seemed less productive than the favorable season would have allowed.

QUEBEC: Grey found no Boloria titania in Gaspé Upper Cascapedia Valley; he believes the site that was productive some years ago in late July has been destroyed by logging and road-building. Sheppard, Grey and others were on Mr. Albert the last week in July, too late for best collecting. Species are spread out over this enormous tableland of arctic tundra (probably more than forty square miles), and are not concentrated. To get results requires keen knowledge of micro-ecologies. Little has been written on this, hence these notes: Papilio brevicauda must be sought on the very highest and most exposed bare rocks. Pyrgus centaureae buzzes the higher alpine garden slopes. Hesperia comma subsp. (new record?) similar but a bit lower. It was too late for Oeneis but a few good female O. taygete were kicked up out of the upper grassy slopes. The males seem to be in the lush wet pockets near snow-fields and brooks. Several interesting alpine moths were netted. The place is a fairyland but two weeks earlier seems indicated. Near the New Brunswick border Hensel's famous Temesquarta County bog area produced well again this year. Everyone should note his definite proof that the flight span of Boloria eunomia is fantastically brief - less than a week. He reports Polygonia gracilis very low. This location, at the Maine-Quebec- New Brunswick corner, seems the best known in the Northeast for productive diurnal collecting.

NEW BRUNSWICK: At Bathurst Coenonympha tullia was abundant, but Lycaena dorcas dospassosi was either just emerging or having a poor year. Polygonia spp. are lamentably low in the woodlands of this province, it seems definite. A general scarcity of diurnals prevails along formerly productive roadsides.

MAINE: The ebb of butterfly populations continues, unbelievably drastic in southern Maine, very evident centrally, less marked northerly. Brower has filed a detailed survey highlighted by the fact that on field trips totalling 165 hours, 2102 miles spent mostly driving trying to see a butterfly, he recorded 1665 specimens, including all trash species

seen on the wing. This is just about what one could have taken in three good days in any nearby clover field thirty years ago. Brower also filed his usual records of earliest captures. His mentioned paper, of detailed records of all the butterflies he saw in 1963 should be a valuable reference in future years. No significant migrations were observed in Maine. The picture in recent years has been of fairly steady colonization in most of the good milkweed patches, a few specimens seen all summer, but no swarming.

NEW HAMPSHIRE & VERMONT: No satisfactory reports this year, aside from a few species taken by Potter on field trips (see under Massachusetts).

RHODE ISLAND & CONNECTICUT: No good regional reports. Hopf's data on Danaus plexippus has these notes: Jamestown, R.I. (Conanicut Island), Mrs. A. G. Davenport observed on September 12 hundreds of this species, all in motion; Sept. 13, four massed groups seen; clustered on privet hedge, estimated 600 individuals. From Cornwall, Conn., an observer (name unfortunately blurred) saw many Danaus plexippus from mid-July on, with latecomers still evident on October 10.

MASSACHUSETTS: Oliver found field and roadside collecting poor, bog collecting good. Summer heat was possibly to blame for the poor showing. Summer hairstreaks were entirely absent in the vicinity of Boston and Lowell. Potter, from the same area, reports similar poor success with summer species, but found Callophrys and Limenitis somewhat up in numbers. Potter has placed on file a detailed and good list summarizing his June-August field trips which ranged from New Jersey to Quebec.

NEW YORK: Staples, in the Rochester area, comments on adverse effects of local poor weather, cold and wet, in August. He notes the loss of a good colony of Papilio polyxenes near Gates - another housing project. Zappalanti infers that on Staten Island even the trash species are thinning out and laments the building boom. MIGRATION: Alice Hopf reports for New York that 231 Danaus plexippus were sighted September 8-30, in the vicinity of Mt. Peter (Stiles Thomas). The largest number was 70 on September 11. From Taberg (near Rome) observer Mrs. Lynes states "...very large numbers this year; never had so many..."

NEW JERSEY: Biskeborne has records from Lakehurst for April 13-20, listing several good takes in Morris and Sussex Counties. Boscoe and Curtis sampled Lakehurst on April 12 & 28 and on May 19 so that combined these Lakehurst data may be complete enough to be of future interest. Evidently 1963 was not a banner year there; the usual and commoner species were taken but the very desirable ones such as Mitoura hesseli and Incisalia irus were absent. Cavanaugh's records from the Morganville area include some data on silkworm flights. He took an Erebus odora September 2. May offers extensive data from the West Caldwell area, records and dates for diurnals and notes of outstanding moth records and a summary of all Danaus plexippus seen. There seems to have been no migrations.

PENNSYLVANIA: Ehle complains of the second successive dry year. Many species were reduced but some such as Papilio glaucus were as numerous as ever. He took a single Papilio crespontes, the first in many years. Shapiro continued his detailed coverage with a 15-page report which included 25 new county records of moths. POSSIBLE STATE RECORD: Sphacelodes vulneraria. He includes significant observations on Vanessa, Limenitis, Atrytonopsis hianna, Papilio polyxenes (alarming low), Parastichtis bicolorago (swarming), Chlaenogramma jasminearum and Callosamia angulifera, among others. His predictions of "trends" seem usually to hit where aimed. His answer to rather indifferent diurnal collecting despite favorable (though somewhat dry) weather reaches, perhaps, farther than he aims. He notes that ideal conditions prevailing for influx of species from more southern regions and figures the "southern reservoirs" must be getting depleted by various causes including a previous severe winter. Your coordinator has believed for some time that this "reservoir" idea will bear looking into, and intends to expatiate thereon before long if nobody else dares to speak up.

ZONE VIII: THE FARTH NORTH. No reports from this Zone.

ZONE IX: THE NORTHERN NEOTROPICS. Coordinator: E. C. Welling. Contributors: G. N. Ross, R. Holland, E. C. Welling.

MEXICO - Baja California Norte: Holland reports very little insect activity on his first visit to this state. Observed July 5 were: Philotes battoides, Colias eurytheme and Everes comyntas, the latter around a waterhole.

SONORA: Welling found deserts flowering locally near San Luis, R. C., but few butterflies, in early March 1964. Pyrgus spp., Pieris protodice, & Vanessa cardui were all noted.

SINALOA: In early March, 1964, Welling noted rather dry conditions but with an abundance of flowering trees and smaller plants. Battus philenor was seen; Nathalis iole and a few hairstreaks were captured.

JALISCO: Early in 1964 Welling observed a few Catasticta, numerous Battus philenor and apparently Battus montezuma near Tequila.

PUEBLA: In early March, 1964, Welling notes almost no insect activity and very dry conditions near Atlixco, a locality that is usually productive during other months.

VERACRUZ: Ross reports from the Santa Marta massif area of the Sierra de San Martin (the Tuxtlas). Spending June, July and August there, taking about 1300 choice specimens representing about 200 species, including some range extensions. Rains were reported to have begun later than usual, and apparently were ample when they came. Life history work was done on about 10 species, the early stages of which were previously unknown.

OAXACA: Welling received many specimens from Chiltepec, +20 m above sea level, Soyolapan el Bajo, +200 m, Puerto Eligio, +700 m, Puerto Antonio, +1300 m, and Vista Hermosa, +1450 m. Apparently insects were scarcer at high elevations than in 1962, and about normal at lower elevations. Greater numbers of Victorina steneles were noted, a species previously never abundant in these areas of heavy rainfall. Papilio thoas was abundant. In early March, 1964, Welling collected at Xia, +1600 m, Municipio Chicozemuchil, and saw only a few Nathalis iole. At Guelatao, +1650 m, Papilio garamas, Danaus plexippus, Pieris protodice, Nathalis iole and assorted skippers and hairstreaks were taken. On the wet northern slope of the Sierra Juarez (or Chinantla) Papilio abderus was caught and seen in fair numbers from +2400 m to +900 m. Graphium calliste was seen at +3100 m, and one was taken at 5:00 P.M. at flowers in deep shade at Puerto Antonio, +1300 m. At Vista Hermosa, many P. abderus, Dismorphia spp., Heliconius hortense and some Ithomiids were present.

YUCATAN: Collecting in Yucatan was the poorest in years in spite of nearly normal rainfall. However, rains began three months later than usual (in August) and continued into January, 1964. Drizzle was frequent in February, due to many northers crossing the Gulf of Mexico.

QUINTANA ROO: Here the season was only fair, but with a noted increase in Caligo memnon Historis odius, Victorina steneles and Chlosyne lacinia. Nocturnal collecting gave good results with sphingids, sometimes as many as 100 being taken in one evening. Especially welcome were numerous specimens of Xylophanes ceratomioides, usually scarce in the northern parts of the Yucatan Peninsula.

BRITISH HONDURAS: Welling collected during May and had very good success in the Stamm Creek Valley at Middlesex, Northern and Central British Honduras was in the grip of a drought but Stamm Creek Valley was the fortunate "victim" of a local phenomenon during 1963. About 20" of rain fell in May in spite of the extremely dry conditions elsewhere in the colony. In June and July sometimes 10" of rain per day was reported. Roads were flooded even in the rolling hilly areas. Collecting for diurnals was very productive. Hoards of Heliconius petiveranus, ismenius and charitonius were taken. Protogonius hippona, Battus sesostris, iphidamas, polyzelus, arcas, polydamas, belas, and laodamas were also present, as was Papilio androgeus. Graphium philolaus was scarce. Collecting at night with UV was extremely exciting. Immense numbers of gigantic moths such as Rothschildia; Arsenura, Copiopteryx and other truly gigantic Arsenurids; Eacles, Citheronia, scores of arctiids, notodontids, pyralids, etc., came to light. Sometimes as many as 30 specimens of Eacles came to the light nightly, representing at least 3 species. Never before were such large choice moths seen in such abundance, anywhere.

GUATEMALA: This country was the object of Welling's third annual collecting expedition. Five months were spent in collecting, two at Sayaxché, El Petén, and two at Tamajún (Tamahú), Alta Verapaz. The former locality is a hot stifling lowland with average rainfall of 70"-100" a year. Rain was thought to be slightly below normal. Butterflies as well as other insects appeared to be lower in numbers than might have been expected for the region, which is an extremely rich equatorial rain forest area. Interesting species were: Morpho peleides, polyphemus & thesius, Battus sesostris, Papilio victorinus, & erostratus, Graphium phaon, salvani, marchandi, belesis, branchus & protesilaus, Catagramma titania, Archonias eurytele, Hesperocharis sp., Dynastor spp., Heliconius sappho, octavia, doris, anderida, cydno, ismenius, petiveranus, & charitonius; Marpesia harmonia, Adelpha phylace plus numerous hairstreaks and skippers. The latter area was at +1100 M above sea level in upper Polochic Valley which drains into the Caribbean Sea. This is a very humid temperate area. Fog and mists were almost continuous. When the sun did come out you might have gone "nuts" deciding which insect to catch first. Victorina epaphus & superba were abundant, as were Anaea, Danaus, Dismorphia, many ithomiids, Ituna lamirus, Olyras theon, Adelpha, Smyrna, Callicore anna & astala, Dynamine glauce, Cyclogramma pandana, Hypanartia, Papilio asterius and others. At Rocja, Municipio, Alta Verapaz, +1700 m, a curious population of Colias was observed and specimens taken. At Coban, Alta Verapaz, +1500 m, numerous Leptophobia aripa and Victorina epaphus were seen. In the very southern part of El Petén, at Cayal, Mpio. Sayaxché, a Callithomia hezia was seen, a new Peninsular record. An Episcada sp. was exceptionally common at higher elevations in Alta Verapaz. During Welling's four day canoe trip up the Rio de la Pasion in southern Petén, to reach Alta Verapaz, hundreds of Heliconius anderida were seen feeding on flowers of the "bitz" tree that grows along the edges of rivers and their tributaries. This is some of the wildest country left in North America outside of parts of Alaska and northern Canada. At Pancajché, +100 m, and Tukurú, +500 m, both in Alta Verapaz, numerous lowland species were seen but not taken. Trips were made to these towns only to observe pre-Colombian Quecchi festivals and rituals. Overall, collecting was good in Guatemala, with many surprises.

RESEARCH REQUEST: We are gathering data for eventual publication of a revised annotated list of the Butterflies of Illinois. The last such list was in 1880. We would appreciate receiving all data concerning Illinois species, especially from out-of-state collectors. Please write to either Dr. John C. Downey, Department of Zoology, Southern Illinois University, Carbondale, Ill., or to Roderick R. Irwin, 1513 East Marquette Road, Chicago, Ill. 60637.

RESEARCH NOTICE: I am working on a synopsis of the Nearctic Catocala and desire fertile ova (these moths overwinter as eggs) of many of the rarer Catocala, to rear larvae from which to prepare a key to the larvae. Specimens of part of the species and information on the biology and habits of all Catocala are needed. Will determine material. Can offer a large number of Lepidoptera, also other orders of insects, in exchange. A. E. Brower, 8 Hospital Street, Augusta, Maine, U.S.A.

 A mimeographed syllabus, "How to prepare slides of sclerotized parts of Lepidoptera", by Harry K. Clench & Lee D. Miller, is available from Section of Insects, Carnegie Museum, Pittsburgh 13, Penn., U.S.A.; please enclose 10¢ to cover postage.

 Volume I of Series II of the Index Litteraturae Entomologicae is available. It has 697 pages and 35,719 titles numbered alphabetically from A (Aargard) to E (Eysell). The price of this first volume is 55 DM. (slightly over \$12.00). There will follow three other volumes to include entries from F to Z. This first volume, as well as the subsequent ones, may be obtained from the Deutschen Entomologischen Institut, Berlin-Friedrichshagen, Deutsche Demokratische Republik (East Germany).

NOTICES

Lepidopterists' Society members may use this section free of charge to advertise their offerings and needs in Lepidoptera. The Editors reserve the right to rewrite notices for clarity or to reject unsuitable notices. We cannot guarantee any notices but all are expected to be bona fide.

WANTED: SPECIMENS OF EUCHEIRA SOCIALIS from Mexico with full collecting data. Will purchase or can offer a good variety of Nearctic or Neotropical Rhopalocera in exchange. John H. Masters, 701 West Washington, Osceola, Arkansas, U.S.A.

 FOR SALE: FORMOSAN BUTTERFLIES - papered with paper body, extended wings, in lots of 100. Also available 10 million assorted Formosan butterflies in stock; Attacus atlas; Actias selene formosana. Write for prices. Mrs. Chang Pi-Tzu, P.O. Box 873, Taipei, Formosa (Taiwan).

 WANTED: OVA AND PUPAE OF NATHALIS IOLE, Colias Eurytheme, Pieris napi & protodice, Papilio p. polyxenes, brevicauda, oregonius, hospiton, & Erora laeta. Also desire singles and series of machaon-complex swallowtails, Archon apollinus, Hypermnestra helios & Zerynthiini, and also Volumes 1-3 (complete) of the Lepidopterists' News. Robert A. Colborne, 2635 Woodstock Road, Columbus 21, Ohio, U.S.A.

 OFFER: 50 SPECIMENS OF ECPANTHERIA INDECISA (ARCTIIDAE) from Uruguay. Will send gratis to anyone with a serious interest in neotropical Arctiidae. John H. Masters, 701 West Washington, Osceola, Arkansas, U.S.A.

 Desired for rearing - living ova of Danaus plexippus, plus some living milkweed seeds of an appropriate species. Also desire ova or early stages of Nymphalis antiopa. Write to L. R. Lassman, 31 Binyon Road, Winchcombe, Cheltenham, Gloucestershire, England.

 There are just four copies left of Sir Keith Cantlie's Revision of the Lycaenidae portion of Evans' 1932 Identification of Indian Butterflies. This was an edition of only 80 copies. For sale by Julian P. Donahue, Department of Entomology, Michigan State University, Michigan 48823, U.S.A.

Memoirs of the Lepidopterists' Society, No. 1 (Feb. 1964)

A SYNONYMIC LIST OF THE NEARCTIC RHOPALOCERA

by Cyril F. dos Passos

Price: Society members - \$4.50, others - \$6.00; postpaid.

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Items for inclusion in the NEWS should be sent directly to the Editor of the NEWS, E. J. Newcomer, 1509 Summitview, Yakima, Wash., U.S.A.
