

RECENT LITERATURE ON LEPIDOPTERA

(Under the supervision of PETER F. BELLINGER)

B. SYSTEMATICS AND NOMENCLATURE

- Bourgogne, J., "Mise au point relative à deux psychides éthiopiennes, *Acanthopsyche brunnescens* Gaede et *Kotochalia junodi* Heylaerts (Lepidoptera Psychidæ)" [in French]. *Bull. Inst. franç. Afrique noire* (A), vol. 21: pp. 1227-1236, 14 figs. 1959. The specific name *brunnescens* is a synonym of *junodi*, but this name may be conserved for the subspecies of West Africa. Fixation of a lectotype for *K. junodi*. [P. V.]
- Bourgogne, J., "La position systématique de *Psyche calamochroa* Hampson (Lep. Psychidæ)" [in French]. *Bull. Soc. ent. France*, vol. 65: pp. 100-102, 5 figs. 1960. Note on the systematic position of this African psychid. The species belongs to the genus *Acanthopsyche*. [P. V.]
- Bourgogne, J., "Remarques sur le genre *Monda* et sur l'espèce *Monda major* Heyl. (Lep. Psychidæ)" [in French]. *Rev. franç. Ent.*, vol. 27: pp. 231-235, 8 figs. 1960. Notes on *Monda* Walker and the species *M. major*; this last is very near an *Oreopsyche*. [P. V.]
- Boursin, Ch., "Eine neue *Euxoa* Hb. aus Spanien (Beiträge zur Kenntnis der 'Noctuidæ-Trifinæ', XCVIII (98))" [in German]. *Zeitschr. wiener ent. Ges.*, vol. 43: pp. 128-133, 152, 2 pls., 1 map. 1958. Describes as new *E. psimithiosa* Huelva, Seville Prov., Spain). [P. B.]
- Boursin, Ch., "Erwiderung an Herrn Agenjo zu seiner 'Antwort an Herrn G. Meyer betreffs Übergänge in der Genitalarmatur von *Bryophila algæ* (Fabricius 1775) und ihrer forma *pallida* (Bethune-Baker 1894) (Lep. Phal.)' in dieser Zeitschrift, 1957, p. 192. (Beiträge zur Kenntnis der 'Noctuidæ-Trifinæ', XCIX (99))" [in German]. *Zeitschr. wiener ent. Ges.*, vol. 43: pp. 176-181. 1958. Maintains that *algæ* & *pallida* are different spp.; points out genitalic differences, & denies that Agenjo's specimens show intergradation. [P. B.]
- Boursin, Ch., "Eine neue Form von *Euxoa* (*Chorizagrotis*) *drewni* Stgr. (Beiträge zur Kenntnis der 'Noctuidæ-Trifinæ' 101)" [in German]. *Zeitschr. wiener ent. Ges.*, vol. 44: pp. 169-171, 1 pl. 1959. Discusses systematic position, figures genitalia; describes new "form" from Greenland. Regards *dissona* & *westermanni* as true *Euxoa* spp. [P. B.]
- Boursin, Charles, "Über zwei für Europa neue *Hadena*-Arten (= *Dianthæcia* B.), *Hadena clara* Stgr. (1901), *bona* sp. und *Hadena urumovi* Dren. (1931), (1931), *bona* sp.! Beiträge zur Kenntnis der 'Noctuidæ - Trifinæ', C (100)" [in German]. *Zeitschr. wiener ent. Ges.*, vol. 44: pp. 113-131, 7 pls. 1959. Redescribes these spp., which have been confused with *H. cæsia*, & reviews races of the 3 spp., with new synonymy & new placement of some names. Describes as new *H. cæsia bulgarica* (Karlovska Hischa, above Karlowo, Jumruk-Tschal, 1800 m., Bulgaria) (= *urumovi* auctt.), *H. clara macedonica* (Petrina planina, 1600 m., Macedonia) (= *xanthophoba* auctt.), *H. clara alpina* (Aiguilles, Vallée du Quayras 1400-1500 m., France), *H. clara dujardini* (St. Martin-Vésubie, Alpes-Maritimes, 1000 m., France), *H. clara kiruschensis* (Kuruschi, Schakh-Dagh, 2500 m., Dagestan), *H. u. scotophoba* (Drenovo, near Kavadar, S. Macedonia), *H. u. germanicæ* (Marasch, Taurus, 1200 m.). [P. B.]
- Boursin, Ch., "Nouvelles 'Trifinæ' d'Afghanistan de l'expédition Klapperich (3ème note) (Lep. Noctuidæ) (Diagnoses préliminaires)" [in French]. *Bull. mens. Soc. linn. Lyon*, vol. 29: pp. 136-152. 1960. Preliminary descriptions of new spp. of trifold noctuids collected in Afghanistan, with lists of palearctic spp. of some genera. Describes as new: *Conisania xanthothrix* (Badakhschan); *Hadena klapperichi* (Badakhschan); *Blepharita aphanes* (Paghman Mts.), *B. dufayi*

- (Ferusch Tagan); *Polymixis polymorpha* (Ejan, Salang valley), *P. p. niviplaga* (Ferusch Tagan), *P. zophodes* (Ejan, Salang valley), *P. stictineura* (Ejan); *Bryopolia holosericea* (Ghorband valley), *B. oropasma* (Sarekanda); *Agrochola statira* (Ferusch Tagan); *Auchmis crassicornis* (Ferusch Tagan); ?*Epipsammia constantialis* (Paghman Mts.), ?*E. agrapha* (Bazarak), ?*E. eudiopsis* (Nuristan); *Timora philbyi nuristana* (Asmar), *T. p. arabica* (El Riad). Unfortunately, except for *T. p. arabica*, all the types (holo—and allotypes) are in a private collection. [P. V.]
- Boursin, Ch., "Nouvelles 'Trifinae' d'Afghanistan de l'expédition Klapperich (4 éme note) (Lep. Noctuidæ) (Diagnoses préliminaires)" [in French]. *Bull. mens. Soc. linn. Lyon*, vol. 29: pp. 167-174. 1960. New series of preliminary descriptions of new species of trifid noctuids from Afghanistan: *Cryphia* (*Bryoleuca*) *diachorisma* (Paghman Mts.), *C. (B.) gigantea* (Badakhschan, Sarekanda); *C. (SCYTHOBRYA)* (type *C. sublitterata* Filipjev; spp. listed), *C. (S.) icterica* (Nuristan, Achmed Dewane, Bashgul valley), *C. (S.) molybdea* (Ferusch Tagan, Khinjan valley), *C. (P.S.) klapperichi* (Nuristan, Bashgul valley); *Æderemia octogesima* (Paghman Mts.). For the holo—and allotypes, same observation as above. [P. V.]
- Box, Harold E., "New species and records of *Diatraea* Guiling and *Zeadiatraea* Box from Mexico, Central and South America (Lepid., Pyral.)." *Bull. ent. Res.*, vol. 47: pp. 755-776, 1 pl., 4 figs. 1956. Describes as new *D. colombiana* (Condoto, Choco Prov., Colombia), *D. balboana* (Summit Gardens, Canal Zone, Panama; reared from stalks of *Setaria paniculifera*), *D. veracruzana* (Teocelo, Vera Cruz, Mex.; reared from *Paspalum* spp.). Records of 22 other spp., with biological & systematic notes. [P. B.]
- Bradley, J. D., "A new species of *Casmara* Walker, 1863, from Malaya (Lepidoptera: Ecophoridae)." *Ann. & Mag. nat. Hist.*, ser. 12, vol. 6: pp. 319-320, 2 figs. 1953. Describes as new *C. diabolella* (Bukit Kutu, 3300 ft.). [P. B.]
- Bradley, J. D., "A new species of *Harmaclona* Busck from Natal (Lep.: Arrhenophanidae)." *Ann. & Mag. nat. Hist.*, ser. 12, vol. 6: pp. 767-768, 2 figs. 1953. Describes as new *H. natalensis* (Umkomaas, Natal). [P. B.]
- Gaillard, R., "Grypocères et rhopalocères du Gard" [in French]. *Rev. franç. Lépid.*, vol. 13: pp. 299-311; vol. 14: pp. 35-39, 154-164. *Alexanor*, vol. 1: pp. 49-55, 81-86, 116-122. 1953-54, 1959. Catalogue of the Rhopalocera and Grypocera of the Gard area in south France. Description, in vol. 13, 1953, of the hesperiid *Pyrgus alveus subdecoloratus* Picard, and, in 1959, of the satyrids *Kanetisa circe gabalæ* & *Minois dryas spiripontis*; these subspecies described as "races". [P. V.]
- Galliker, Pedro, "Morphologie und Systematik der präimaginalen Stadien der schweizerischen *Solenobia*-Arten (Lep. Psychidae)" [in German]. *Rev. suisse Zool.*, vol. 65: pp. 95-184, 8 pls., 29 figs. 1958. Study of general and comparative morphology of egg, larva, pupa, and case in Swiss spp.; gives key to spp. based mainly on case. [P. B.]
- Gardner, A. E., & E. W. Classey, "Report on the insects collected by the E. W. Classey and A. E. Gardner expedition to Madeira in December 1957." *Proc. Trans. South London ent. nat. Hist. Soc.*, 1959: pp. 184-206. 1960. Annotated list of some orders of insects, including 57 spp. of Lepidoptera. *Cobaliodes dubiosa* is transferred to *Euplexia*. [P. B.]
- Goodwin, George H., jr., "Earlier dates for *Libythea bachmanii* and *Macroglossa balteata*." *Lepid. News*, vol. 12: p. 123. 1959.
- Gozmány, L. A., "Notes on the generic group *Symmoca* Hbn. (Lep. Gelechiidae)." *Ann. Hist.-nat. Mus. nation. hung.*, n. s., vol. 8: pp. 325-346, 9 figs. 1957. Proposes SYMMOCINÆ, new subfamily. Describes as new *S. (CONQUASSATA)*, & type *S. (C.) perobscurata* (Escorial, Madrid Prov., Spain), *S. (C.) attalica* (Attica, Greece); *APROMINTA* (type *cryptogamarum* Mill.); *CATASPHALMA* (type *kautziella* Rbl.); *PARTHENOPTERA* (type *virginella* Rbl.); *ACROSYNTAXIS* (type *angustipennis* Rbl.); *Eremica klimeschi* (Mistretta, Mercurio, Sicily, 700

- m.); *AMSELINA*, & type *A. olympi* (Bithynia, Bolu); *HAMARTEMA* (monobasic), *H. marthæ* ("S. Gredos, Hoyos, D. Esp. Cast[ilia], 1400 m."); *Donaspastus mediterraneus* (S. Martino di Scala, Palermo, Sicily); *TELEPHIRIA* (type *quadrifariella* Mann); *NEOSPASTUS* (type *delicatellus* Wlsglm.); *THANATOVENA* (type *ægrella* Wlsglm.); *EXORGANA* (Timyridæ) & type *E. iranica* (Poin Schahkuch, N. Persia). Study of all spp. of "*Symmoca*" of which material was available, mainly from types; spp. are assigned to new or existing genera; venation of genera is figured; ♂ genitalia of spp. are figured when possible. The few spp. which could not be studied are listed. [P. B.]
- Gozmány, L., "Notes on Hungarian Phycitidæ (Lepidoptera)." *Ann. Hist.-nat. Mus. nation. hung.*, vol. 50 (n. s., vol. 9): pp. 223-225, 5 figs. 1958. Describes as new *XENEPHESTIA* (type *Ephestia cautella*); *SYNALLOREMA* (type *triangulella* Rag.); *CYMBALORISSA* (type *CYMBALORISSA* (type *fuliginosella* Hein.); *CATACROBASIS* (type *obtusella* Hbn.); *KYRA* (type *cirrigerella* Zck.). [P. B.]
- Gozmány, L. A., "A new moth from Hungary (Lepidopt.)." *Acta zool. Acad. Scient. hung.*, vol. 4: pp. 317-318, 3 figs. 1959. Describes as new *Infurcitinea finalis* (Kaposvár, Com. Somogy). [P. B.]
- Gozmány, L., "Some new considerations on the generic group *Symmoca* Hbn. (Lep., Gelechiidæ)." *Acta zool. Acad. Scient. hung.*, vol. 5: pp. 41-48, 3 figs. 1959. Describes as new *Aprominta reisseri* (Silva Rouva, Mt. Ida, Crete), *A. gloriosa* (Zachlorou (Kalav), Greece), *A. xena* (Hierapetra, Crete); *Symmoca klimeschiella* (Litochoron, 3000 m., N. Greece); *ILLAHASIS* (monobasic), *I. virgo* (Assites, 500 m., Crete). Notes on some of Caradja's specimens of "*Symmoca*". [P. B.]
- Gozmány, L., "The results of the zoological collecting trip to Egypt in 1957, of the Natural History Museum, Budapest. 6. Egyptian Microlepidoptera. Part I" [in English; Russian summary]. *Ann. Hist.-nat. Mus. nation. hung.*, vol. 51: pp. 363-370, 5 figs. 1959. Describes as new *BOROSIA* (Phycitidæ; monobasic), *B. ægyptiaca* (Marsa el Alam, on Red Sea); *Ommatopteryx szijjártói* (Idfu, upper Egypt), *O. ilku* (Kom Osim oasis, the Fayum); *Staudingeria ruelhi* (Marsa el Alam); *Stenoptilia csanádi* (Hurghada, on Red Sea); *ILIONARSIS* (Scythrididæ; monobasic), *I. földvárí* (Marsa el Alam). [P. B.]
- Gozmány, L., "Tineid moths from Afghanistan (Lep., Tineidæ)." *Acta zool. Acad. Scient. hung.*, vol. 5: pp. 341-352, 5 figs. 1959. Describes as new *Nemapogon kabulianus* (vicinity of Kabul, 1740 m.); *Tinea distans* (Nuristan, Bashgultal, 2800 m.); *AFGHANOTINEA* (monobasic), *A. klapperichi* (Bashgultal, 1200 m.); *Catabola nuristanica* (Bashgultal, 1200 m.); *APHRODOXA* (monobasic), *A. astarte* (Nuristan, Kutiau, 1550 m.); *Episcardia mimetica* (vicinity of Kabul, 1740 m.); *SPHALLESTHASIS*, & type *S. similis* (Bashgultal, 1100 m.), *S. gracilis* (Bashgultal, 1150 m.); *LAZOCATENA* (monobasic), *L. mira* (Kamu, Bashgultal, 1500 m.). Prior publication on Afghanistan material by Petersen makes the following synonymy necessary: *C. sarobiella* (= *nuristanica*), *C. amseli* (= *E. mimetica*), *C. peterseni* (= *A. astarte*), *L. obscura* (= *mira*), *S. luteola* (= *S. similis*). Records of 2 other tineids. [P. B.]
- Gozmány, L., "New and rare tineids from the palearctic region and one from Ethiopia (Lepidopt.)." *Acta zool. Acad. Scient. hung.*, vol. 6: pp. 103-115, 6 figs. 1960. Describes as new *Nemapogon hispanellus* (Madrid Prov., Spain), *N. hungaricus* (Harsbokorhegy, Budakeszi, Hungary); *Neurothaumasia africana* (L. Sedjoui, Tunisia); *Reisserita australis* (Madrid Prov., Spain); *Tinea exquisita* (Zengg, Croatia); *Infurcitinea captans* (Wippach, Carniolia), *I. minuscula* (Chiclana, Spain); *Catabola abscondita* (Tel-Aviv); *PETERSENIA* (monobasic), *P. perplexa* (Tenfecht, 3000-4000 ft., Great Atlas, Morocco); *Myrmecozela ethiopica* (Tshertsher, Abyssinia); *Episcardia* (?) *incerta* (Alberca, Murcia, Spain). Describes previously unknown ♂ of *Nemapogon gravesellus*. New locality records for a number of spp. [P. B.]
- Gregor, Frantisek, & Dalibor Povolny, "Bemerkungen zu einer Revision der an den Papilionaceæ lebenden *Lithocolletis*-Arten" [in German; Czech summary]. *Acta*

- Soc. ent. Cechoslovenia, vol. 57: pp. 84-90, 7 figs. 1960. *L. desertella* Greg. & Pov. and *L. staintonella* Stt. are two distinct spp. [J. M.]
- Grey, L. Paul, "The equation of subspeciation." *Journ. Lepid. Soc.*, vol. 13: pp. 173-174. 1960.

C. MORPHOLOGY AND CYTOLOGY

- Beckel, W. E., "The morphology, histology and physiology of the spiracular regulatory apparatus of *Hyalophora cecropia* (L.) (Lepidoptera)." *Proc. 10th internat. Congr. Ent.*, vol.2: pp.87-115, 42 figs. 1958. Very detailed description with numerous illustrations of the internal anatomy of a typical abdominal segment in larva, pupa, & adult, including musculature, nervous supply, & spiracular apparatus, and of histology of the latter. The spiracle is closed by a muscle inserted on a closing lever, and opened by an antagonistic elastic column which is not a muscle and has no innervation. No ganglia or nerve cell bodies were found in the vicinity of the spiracle, and no morphological explanation was found for the observed ability of the denervated spiracle to open and close rhythmically. [P.B.]
- Berio, E., "Studi sull' armatura genitale dei lepidotteri III. Individuazione del X^o anello abdominale [in Italian]. *Boll. Lab. Zool. gen. agrar. Portici*, vol.33: pp.330-340, 3 figs. 1956. Discusses structure of 10th abdominal segment in Lepidoptera; it is said to form a complete ring, the sternum being represented by the valves and the piece connecting them ventrally, if present. Based mainly on study of *Anua* spp. [P.B.]
- Bigger, T. R., "Chromosome numbers of Lepidoptera—Part I." *Ent. Gazette*, vol.11: pp.149-151, 2 pls., 25 figs. 1960. Gives figures of chromosomes and lists haploid number for 25 spp. (Satyridae, Nymphalidae, Lycaenidae, Pieridae, Hesperidae, Noctuidae, Zygaenidae, Pyralidae). [P.B.]
- Bonhag, Philip F., "Ovarian structure and vitellogenesis in insects." *Annual Rev. Ent.*, vol.3: pp.137-160, 8 figs. 1958. Review article.
- Bourgogne, J., "Note servant d' introduction à un travail de cytologie appliquée à la systématique des lépidoptères" [in French]. *Alexandria*, vol.1: pp.59-61. 1959. For the amateurs, some notes of popularization about the chromosomes and the formation of the gametes. [P.V.]
- Buckler, H. A., "A gynandromorph of *Euproctis similis* Fues." *Ent. Rec. & Journ. Var.*, vol.67: p.237. 1955. Bilateral gynandromorph which laid fertile eggs. [P.B.]
- Callahan, Philip S., "Serial morphology as a technique for determination of reproductive patterns in the Corn Earworm, *Heliothis zea* (Boddie)." *Ann. ent. Soc. Amer.*, vol.51: pp.413-428, 10 figs. 1958. Describes morphology of reproductive system and mechanics of spermatophore formation & disposition from dissections of individuals & mated pairs. Nearly 1/2 of wild ♀♀ do not mate. Effects of mating on reproductive organs, eggs, & fat bodies are discussed. [P.B.]

H. MIGRATION

- Cookson, H., "Migration of the hesperiid butterfly, *Andronymus neander*, at the Vumba near Umtali in Southern Rhodesia." *Entomologist*, vol.91: p.99. 1958.
- Daniel, Franz, "Wanderfalterbeobachtungen in der südlichen Steiermark 1958" [in German]. *Nachrichtenbl. bayer. Ent.*, vol.7: pp.97-100. 1958. Report on migratory movements of 17 spp. [P.B.]
- Dickson, G. G. C., & T. W. Schofield, "Observations on the migration of *Belenois aurota* (F.) (Lepidoptera: Pieridae)." *Journ. ent. Soc. southern Afr.*, vol.21: pp.427-428. 1958. Notes on migration in late 1957 in Natal. [P.B.]
- Foltin, Hans., "Wanderfalter-Einflug im Frühling 1958" [in German]. *Ent. Nachrichtenbl.*, Vienna, vol.5, no.8: pp.1-2. 1958. Records of migrants & other spp. in Austria. [P.B.]

- French, R. A., "Migration records 1957." *Entomologist*, vol.91: pp.101-109. 1958. British immigrant Lepidoptera. [P.B.]
- French, R. A., "Migration records 1958." *Entomologist*, vol.92: pp.164-176. 1959.
- Griveaud, P., "Sur les déplacements de *Chrysidia madagascariensis* (Lepidoptera Uranidæ)" [in French]. *Naturaliste malgache*, vol. 11: pp.107-109. "1959" [1960]. Note on the migrations of this malagassic uraniid. [P.V.]
- Hayward, Kenneth J., "Migration of butterflies in Argentina (summer 1956-57)." *Entomologist*, vol.91: pp.163-164. 1958. Migration near Tucumán of *Libytheana carinenta* & several pierids & nymphalids. [P.B.]
- Hayward, Kenneth J., "Migration of butterflies in north-western Argentina. Spring and summer 1959-1960." *Entomologist*, vol.93: pp.237-240. 1960. Notes mainly on *Colias lesbia* & *Ascia monuste*. [P.B.]
- Holgersen, Holger, "Dødningshodet i Norge høsten 1956 (Lep. Sphingidæ)" [in Norwegian]. *Årbok Stavanger Mus.* 1956: pp.145-149, 2 figs. 1957. Describes influx of *Acherontia atropos* in Norway in late summer of 1956, associated with winds from the south. One record was as far north as lat. 66° 20' N. [C.R.]
- Huggins, H. C., "Immigrants (Lepidoptera) on Tresco, Isles of Scilly, 1958." *Entomologist*, vol.91: pp.251-252. 1958. Notes on 12 spp.

I. TECHNIQUE

- Bean, J. L., "The use of larvævorid maggot drop in measuring trends in Spruce Budworm populations." *Ann. ent. Soc. Amer.*, vol.51: pp.500-403, 2 figs. 1958. *Choristoneura fumiferana*.
- Bean, James L., "Frass size as an indicator of Spruce Budworm larval instars." *Ann. ent. Soc. Amer.*, vol. 52: pp.605-608, 2 figs. 1959. Frass width is correlated with instar in *Choristoneura fumiferana*. Frass collected in funnels under trees can be used to determine population structure at a given time. [P.B.]
- Beckel, W. E., "Sectioning large heavily sclerotized whole insects." *Nature*, vol.184: pp.1584-1585. 1959. Recommends tetrahydrofuran for fixation & clearing and sectioning directly onto Scotch Tape no.810 followed by transfer to slides. [P.B.]
- Birkett-Smith, Jorgen, "Genital preparations of male Lepidoptera." *Ent. Meddelelser*, vol.29: pp.170-178, 9 figs. 1959. Describes techniques for removing ♂ genitalia without altering appearance of abdomen (by microdissection following local relaxation) and for mounting genitalia on labels; also describes instruments used and their manufacture. [P.B.]
- Blakeley, P. E., L. A. Jacobson, & R. R. Forster, "Rearing the Army Cutworm, *Chorizagrotis auxiliaris* (Grote) (Lepidoptera; Noctuidæ), in the laboratory." *Canad. Ent.*, vol.90: pp.301-302. 1958.
- Bliss, C. I., "The analysis of insect counts as negative binomial distributions." *Proc. 10th internat. Congr. Ent.*, vol.2: pp.1015-1032, 2 figs. 1958.
- Bourgogne, J., "Observations sur le bocal à cyanure" [in French]. *Alexanor*, vol.1: pp.29-32, 2 figs. 1959. Observations on the fabrication of cyanide jars to kill Lepidoptera. [P.V.]
- Bourgogne, J., "Le bocal à tetrachlorure de carbone" [in French]. *Alexanor*, vol.1: pp.36-38. 1959. Note about a jar with carbon tetrachloride to kill some Lepidoptera, chiefly *Zygæna* and *Procris*. [P.V.]
- Brady, Philip, "'Gunning' for butterflies." *Nature Mag.*, vol.52: p.360. 1959. Use of carbon tetrachloride in special spray gun for collecting. [P.B.]
- Brown, Leland R., "Using the speedlight in entomology." *Journ. biol. fotogr. Assoc.*, vol.22: pp.17-21. 5 figs. 1954.
- Byers, George W., "Individual identification labels for pinned insect specimens." *Ent. News*, vol.69 pp.113-116. 1958. Recommends that specialists determining specimens attach species label to each. [P.B.]
- Byers, George W., "A rapid method for making temporary insect labels in the field." *Journ. Lepid. Soc.*, vol.13: pp.96-98, 1 fig. 1960.