

ODONATOLOGICAL ABSTRACTS

1974

- (4470) MORETTI, G., F. CIANFICCONI & Q. PIRISINU, 1974. Facies faunistica invernale dell'ecosistema astatico del Piano Grande (Monti Sibillini — Umbria). *Riv. Idrobiol.* 13(1): 95-111. (With Engl. s.). — (Ist. Zool., Fac. Sci., Univ. Perugia, Perugia, Italy).
The winter aspect of the astatic ecosystem of the Piano Grande, Sibillini Mts, Umbria, Italy is recorded and discussed. The Odon. listed are *Coenagrion puella*, *Lestes dryas*, *Libellula depressa* and *Sympetrum flaveolum* (all identified by C. Conci).

1976

- (4471) CHOVET, M., 1976. *L'alimentation de la larve de Cordulegaster boltoni (Donov., 1807) (Odonates: Anisoptères) dans son milieu naturel*. Thèse Docteur 3e cycle, Univ. Lyon-I. 80 pp., pls, figs, tabs excl. L'Hermès, Lyon. — (Author's present address unknown; —, Publishers: Editions L'Hermès, 31 rue Pasteur, F-69007 Lyon).
The feeding behaviour and the prey of larval *C. boltoni* are described, analysed and discussed in great detail.
- (4472) CIANFICCONI, F., G.P. MORETTI, Q. PIRISINU & F. TUCCIARELLI, 1976. Composizione sistematica delle comunità acquatiche del settore meridionale dei Monti Sibillini, con considerazioni zoogeografiche. *Lav. Soc. it. Biogeogr.* (NS) 4: 1-48, 1 folded map, 1 folded tab., col. pls 1-9 excl. (sep.). (With Engl. s.). — (Ist. Zool., Fac. Sci., Univ.

Perugia, Perugia, Italy).

4 aquatic ecosystems in the southern Sibillini Mts, central Italy, were studied during 1974-1976. The faunal composition, ecology and biogeography are discussed in detail, and 8 odon. spp. are listed.

- (4473) JOHANSSON, O.E., 1976. *Ecological studies on co-existence amongst damselfly larvae (Odonata: Zygoptera) in the Norfolk Broads*. PhD thesis, Univ. East Anglia. 243 pp. — (Author's last known address: Great Lakes Biolimnol. Lab., 867 Lakeshore Blvd, Burlington, Ontario, CA).
[Not available for abstracting]. Cf. also *OA* 2304.

- (4474) MORETTI, G.P., P. CIANFICCONI & F. TUCCIARELLI, 1976. Bilancio ecologico e genómico delle biocenosi alle confluenze del F. Tevere in Umbria. *Lav. Soc. it. Biogeogr.* (NS) 4: 1-46, 2 folded tabs, col. pls 1-6 excl. (sep.). (With Engl. s.). — (Ist. Zool., Fac. Sci., Univ. Perugia, Perugia, Italy).
During 1974-1975 the ecology and biogeography of Tiber R., at the confluence of its 4 Umbrian tributaries (the Chiascio, Nestore, Paglia and Nera), Italy, were studied. 10 odon. spp. are recorded, and the order is considered at the appropriate places in the discussion. Generally, 46% of the invertebrate fauna of the Tiber has a northern origin.
- (4475) STOUT, V.M., 1976. Class Arachnida. In: A. Chapman, M. Lewis & V. Stout, An introduction to the freshwater Crustacea of New Zealand, pp. 199-214. Collins, Auckland-

-London. — (Dept Zool., Univ. Canterbury, Private Bag, Christchurch-1, NZ).

The common hosts for aquatic mites in New Zealand are the hemipterans Anisops and Sigara, whereas the most common hosts in the northern hemisphere are Plecoptera, Odon., Diptera, Hemiptera and Coleoptera (p. 203). Nymphophans of Arrenurus sp. have been found on Zygoptera in New Zealand (p. 208).

1978

- (4476) FRICK, A., 1978. Mundartliche Tierbezeichnungen im Fürstentum Liechtenstein. *Ber. bot.-zool. Ges. Liechtenstein-Sargans-Werdenberg* 8: 72-95. — (c/o Secretary Bot.-Zool. Ges. Liechtenstein: W. Kaufmann, Ramschwagweg 474, FL-9496 Balzers, Liechtenstein).

The folk expressions in the Liechtenstein (German) dialect are listed for various animals. The following terms are given for the "dragonfly": "*Wasserjupfara*"; "*Seejupfara*"; "*Rossangel*" (from Triesenberg and Balzers). In the Balzers area, the expressions "*Rossangla*" is used for dragonfly, hornet, and for the horse-fly.

1979

- (4477) DI GIOVANNI, M.V., M.I. TATICCHI & O. TIBERI, 1979. Il piano di Rascino (Rieti - Lazio): note idrobiologiche e biogeografiche. *Lav. Soc. it. Biogeogr.* (NS) 6: 569-582 (With Engl. s.).

5 odon. spp. are listed from the Rascino plain (Lazio, Italy). For further records cf. OA 4010.

- (4478) ZDUN, V.I. & R.S. PAVLJUK, 1979. Ob izmenenii-granic arealov nekotorykh vidov strekoz (Odonata). — Über die Veränderung der Arealgrenzen einiger Libellen-Arten (Odonata). *Verh. VII. int. Symp. Ent. Faun. Mitteleur., Leningrad*, pp. 367-369. (Russ., with Germ. title on p. 383). — (Dept Invertebr. Zool., Lvov Univ., 4 Shcherbakov Str., USSR-290005 Lvov).

The range extension and the increase of abundance of *Sympetrum depressiusculum* in eastern Europe are traced from 1895, and

discussed in some detail. A similar northward range expansion is also apparent in *Ischnura pumilio* and in *Orthetrum albistylum*.

1980

- (4479) BIEDERMANN, J., 1980. Naturschutzgebiet Ruggeller Riet. Erforschung Odonatenfauna (Libellen). *Ber. bot.-zool. Ges. Liechtenstein-Sargans-Werdenberg* 10: 37. — (In der Blacha, FL-9494 Planken, Liechtenstein). *Calopteryx splendens*, *Ischnura pumilio* and *Somatochlora flavomaculata* are added to the odon. list of the wetland Nature Reserve, Ruggeller Riet, in the Principality of Liechtenstein. (Cf. also OA No. 3408).

- (4480) MONTGOMERY, B.E., 1980 [published 1982]. Effect of photoperiod and temperature upon the growth rate of the later instars of *Erythemis simplicicollis* (Say) (Odonata: Libellulidae). *Proc. Indiana Acad. Sci.* 90: 266-273. — (Author deceased).

The life history of this sp. was originally worked out by G.H. Bick (1941, *Annls ent. Soc. Am.* 34: 215-230). His observations are supplemented here with thoroughly documented results of the author's experimental rearings. It is summarized that *E. simplicicollis* appears to have only 1 generation a year and to pass the winter in all instars as young as the octult, possibly younger, as there are no data on either the "long" instars earlier or any occurrence of the earlier instars in the spring or autumn. There are no definite broods, ovipositing continuing through most of the flight period, and development being lengthened or interrupted, by the lower temperatures and shorter day lengths of winter in any instar. However, it seems possible that a few individuals might complete the life cycle during a single season and that others might go through 2 winters. It is also very likely that the shorter developmental period in the Louisiana population, with a longer season of favourable growth, may result in a partial second generation and that in more southern areas there could be 2 generations a year. In the northern portion of the range, with opposite conditions, it is probable that more than a year

is regularly required for a generation.

- (4481) NESTLER, J.M., 1980. *Niche relationships of the Anisoptera of Lake Isaqueena*. PhD thesis, Clemson Univ., Clemson, SC. 150 pp. — (Author's last known address: Dept Zool., Clemson Univ., Clemson, SC, USA). [Not available for abstracting]. Cf. also *OA* 2123.
- (4482) PETERSON, M. & T.J. HAWKESWOOD, 1980. A record of *Orthetrum caledonicum* feeding on another dragonfly. *Western Austral. Naturalist* 14(7): 201. — (Authors' addresses not stated). *O. caledonicum* feeding on *Diplacodes haematodes* (both adult) is recorded and a photograph is shown.

1981

- (4483) JOGER, U., 1981. Die Wassergefüllte Wagen-spur: Untersuchungen an einem anthropogenen Miniatur-Ökosystem. *Decheniana* 134: 215-226. — (Fachbereich Biol.-Zool., Lahn-berge, D-3550 Marburg/Lahn, FRG). The miniature aquatic ecosystem of car-tracks in a mixed forest nr Marburg, FRG, was studied systematically, and the survival strategy of *Aeshna cyanea* larvae (occurring in a small population in one of the tracks) is discussed in some detail.
- (4484) JURZITZA, G., 1981. [published 1983]. Identificación de los representantes chilenos del genero *Gomphomacromia* (Corduliidae: Odonata). *Revta chilena Ent.* 11: 31-36. (With Engl. s.). — (Bot. Inst., Univ. Karlsruhe, Kaiserstr. 12, D-7500 Karlsruhe, FRG). Colour patterns of thorax, the last abd. segments and of male anal appendages, and the penile organ of *Gomphomacromia chilensis*, *G. etcheverryi* and *G. paradoxa* are described and illustrated.
- (4485) KLAUSNITZER, B., 1981. Grossstädte als Lebensraum für mediterrane Faunenelemente. *Acta ent. jugosl.* 17(1/2): 33-39. (With Engl. & Croat. s's). — (Sekt. Biowiss., Karl-Marx-Univ., Talstr. 33, DDR-7010 Leipzig, GDR).

It is argued that the increase in the mean annual temperatures in the large European cities is responsible for the local occurrence of submediterranean and mediterranean faunal elements. The occurrence of *Erythromma viridulum* in Dresden, Leipzig and Jena is among the examples listed.

- (4486) WINTERBOURN, M.J., J.S. ROUNICK & B. COWIE, 1981. Are New Zealand stream ecosystems really different? *N.Z. Jl. Marine Freshw. Res.* 15: 321-328. — (Dept Zool., Univ. Canterbury, Christchurch-1, NZ). The authors emphasize (p. 322) the paucity of Megaloptera, Odon., Gastropoda, and Crustacea in New Zealand lotic systems.

1982

- (4487) ARTHUR, J.W., J.A. ZISCHKE & G.L. ERICKSEN, 1982. Effect of elevated water temperature on macroinvertebrate communities in outdoor experimental channels. *Water Res.* 16: 1465-1477. — (First Author: U.S. Environ. Prot. Agency, Monticello Ecol. Res. Stn, P.O. Box 500, Monticello, MN 55362, USA). A passing reference is made to the occurrence of *Coenagrionidae*, without species names.
- (4488) BELYSHEV, B.F. & A. Yu. HARITONOV, 1982. Areal *Enallagma cyathigerum* Charp. (Insecta, Odonata) i problema beringiyskikh faunisticheskikh svyazey. — Areal *Enallagma cyathigerum* Charp. and problem of Bering Land faunistical connections. [Sic!]. *Izv. sib. Otdel. Akad. Nauk SSSR (Biol.)* 1982 (3): 84-86. (Russ., with Engl. s.). — (First Author: Ul. Kirova 76-7, USSR-630102 Novosibirsk). The distribution and infraspeciation of *E. cyathigerum* indicates that the sp. originates in N. America, and came to Eurasia across the Atlantic rather than across the Bering Strait.
- (4489) CLAESSENS, S., 1982. De libellen van de Rouwkuilen. — [Dragonflies of the Rouwkuilen]. *Limbo* 1982 (Dec.): 17-21. (Dutch). — (Mgr. Nolenstraat 5, Venray, NL). Annotated list of 24 spp. from this locality nr Venray, Zuid Limburg prov., The Netherlands.

The occurrence of *Erythromma viridulum* is of some regional interest.

- (4490) ISHIDA, S., 1982. The larvae of the genus *Planaeschna* of Japan (Odonata: Aeschnidae). *Special Issue M. Chujo*, pp. 165-168, Nagoya. — (Ent. Lab., Coll. Agric., Ehime Univ., Tarumi, Matsuyama, 790, JA).
The ultimate instars of *P. risi sakishimana* and *P. ishigakiana* are described and figured, and a key to the larvae of the Japanese members of the genus is provided.
- (4491) KARL, B.J. & H.A. BEST, 1982. Feral cats on Stewart Island; their foods, and their effects on kakapo. *N.Z. J. Zool.* 9: 287-294. — (First Author: Ecol. Div., DSIRO, Private Bag, Lower Hutt, NZ).
Of the few invertebrates taken as food, ground wetas (*Hemiandrus* sp.) were the most frequent prey. Other insects included cicadas dragonflies (spp. not identified), and beetles. Tab. I (p. 289) lists *Uropetala carovei* as the dragonfly used in calculating average prey weights. (Cf. also OA 2794).
- (4492) KIAUTA, B. & M. KIAUTA, 1982. *List of species, with chromosome numbers and preliminary notes on the karyotypes of the Odonata, collected in May, 1979 and August, 1980 by the members of the Kansai Research Group of Odonatology, and examined by B. and M. Kiauta*. Report for the Kansai Research Group of Odonatology, Osaka. Mimeographed. 8 pp. — (Dept. Animal Cytogen. & Cytotaxon., Univ. Utrecht, Padualaan 8, Utrecht, NL).
The locality data, male chromosome numbers, and notes on karyotypic morphology are given for the following 58 spp., all from various localities in Osaka Prefecture, if not stated otherwise (Japan): *Platynemididae*: *Coeleccia r. ryukyuensis* Asah. (n=13, m uncertain; Okinawa-honto), — *Copera a. annulata* (Sel.) (n=13, m), — *Platynemis foliacea sasaki* Asah. (n=13); — *Coenagrionidae*: *Acia-grion migratum* (Sel.) (n=14, m; Osaka and Wakayama Pref.), — *Cercion c. calamorum* (Ris) (n=14, m), — *C. sexlineatum* (Sel.) (n=14, m), — *Ceragrion melanurum* Sel. (n=14, m), — *C. nipponicum* Asah. (n=14, m), — *Ischnura asiatica* Br. (n=14), — *I. senegalensis* (Ramb.) (n=14, no apparent m), — *Pseudagrion p. palidorsum* (Br.) (2n=27, no m?; Okinawa-honto); — *Lestidae*: *Indolestes peregrinus* (Ris) (n=13, m; Osaka and Wakayama Pref.), — *Lestes sponsa* (Hans.) (n=13, m), — *L. temporalis* Sel. (n=13, m), — *Sympecma p. paedisca* (Eversm.) (n=13, m; Osaka and Nara Pref.); — *Calopterygidae*: *Calopteryx atrata* Sel. (n=13, m), — *C. cornelia* Sel. (n=13, m; Wakayama Pref.), — *Mnais pruinosa nawai f. nawai* Yamamoto (n=13, m; Osaka, Hyogo and Wakayama Pref.), — *M. p. pruinosa f. esakii* Asah. (n=13, m; Wakayama Pref.), — *M. p. pruinosa f. shirosui* Asah. (n=13, m), — *M. p. pruinosa f. strigata* Sel. (n=13, m; Osaka, Mie and Wakayama Pref.); — *Epiophlebiidae*: *Epiophlebia superstes* (Sel.) (n=13, bad material: Osaka and Wakayama Pref.); — *Petaluridae*: *Tanypteryx pryeri* (Sel.) (n=9, m; Hyogo Pref.); — *Gomphidae*: *Davidius nanus* (Sel.) (n=12; Osaka and Wakayama Pref.), — *Gomphus melaenops* Sel. (n=12, m large; Saga Pref.), — *Ictinogomphus clavatus* (Fab.) (n=12), — *I. pertinax* (Sel.) (n=12; Kochi Pref.), — *Sieboldius albardae* Sel. (n=12, m), — *Trigomphus citinus tabei* Asah. (n=11; Hyogo Pref.), — *T. interruptus* (Sel.) (n=10), — *T. ogumai* Asah. (n=11; Hyogo Pref.); — *Aeshnidae*: *Aeshna nigroflava* Martin (n=14, m; Nagano Pref.), — *Aeschnophlebia longistigma* Sel. (n=14, m; Osaka and Kochi Pref.), — *Anax parthenope julius* Br. (n=14, m), — *Boyeria maclachlani* (Sel.) (n=14, m), — *Gynacantha japonica* Bart. (n=14, m), — *Planaeschna milnei* (Sel.) (n=14, m hardly recognizable in size; Kochi Pref.), — *Polycanthagina melanictera* (Sel.) (n=14, m), — *Cordulegastridae*: *Anotogaster sieboldii* (Sel.) (n=13, m); — *Corduliidae*: *Epitheca marginata* (Sel.) (n=13, m; Hyogo Pref.), — *Epopthalmia elegans* (Br.) (n=13, m), — *Hemicordulia okinawensis* Asah. (n=13, m; Okinawa-honto), — *Macromia a. amphigena* Sel. (2n=25, poor material), — *Somatoclora viridiaenea atrovirens* Sel. (n=13); — *Libellulidae*: *Crocothemis servilia* [mariannae Kiauta] (n=12, no m), — *Deilelia phaon* (Sel.)

- (n=13, m), — *Lyriothemis elegantissima* Sel. (n=13; Okinawa-honto), — *L. pachygastra* (Sel.) (n=12, m), — *Nannophya pygmaea* Ramb. (n=13, m), — *Orthetrum albistylum speciosum* (Uhler) (n=13, m), — *O. triangulare melania* (Sel.) (n=13, m), — *Pseudothemis zonata* (Burm.) (n=12), — *Rhyothemis fuliginosa* Sel. (n=13, m), — *Sympetrum darwinianum* (Sel.) (n=13, m hardly recognizable in size), — *S. e. eroticum* (Sel.) (n=11, 2n=21, X smallest), — *S. frequens* (Sel.) (n=13, m), — *S. gracile* Oguma (n=13, m), — *S. kunkeli* (Sel.) (n=13, m), — *S. parvulum* (Bart.) (n=13, m), — *S. r. risi* Bart. (n=13, m), and *S. s. speciosum* Oguma (n=13, m). — The observations are based on 111 specimens (434 Feulgen preparations), yielding 2468 micrographs.
- (4493) KING, C.M. & J.E. MOODY, 1982. The biology of the stoat (*Mustela erminea*) in the National Parks of New Zealand. II. Food habits). *N.Z. J. Zool.* 9: 57-80. — (First Author: 3 Waerenga Rd, Eastbourne, NZ). 2 odon. only were found in the guts examined, 1 of which was identified as *Uropetala carovei*; it is shown as coming from Westland National Park.
- (4494) KUMAR JAIN, S. & H.N. BAIJAL, 1982. On the wing venation of subfamily Lestinae (Zygoptera: Odonata) with remarks on its taxonomic value. *J. ent. Res.* 6(1): 68-72. — (Zool. Dept, Agra Coll., Agra-282002, India). The wing venation of *Platylestes p. platystyla*, *Lestes paemorsa* and "*Ceylonolestes*" (= *Indolestes*) *cyanea* is described and figured, using the Comstock-Needham nomenclature. The taxonomic significance of the structure of pterostigma, anal bridge, post costal nervure and the quadrilateral is emphasized.
- (4495) MARTINEZ, S., 1982. Catalogo sistematico de los insectos fosiles de America del Sur. *Revta Fac. Human. Cien., Montevideo* (Cien. Tierra) 1(2): 29-84. (With Engl. s.). — (Depto Paleont., Mus. Nac. Hist. Nat., C.C. 899, Montevideo, Uruguay). Annotated catalogue and bibliography, with data on localities, stratigraphy, and on deposition of the type material. The synonymy is stated; a chronological arrangement of the taxa, and a topographic map showing the main localities.
- (4496) MOEED, A. & B.M. FITZGERALD, 1982. Foods of insectivorous birds in forest of the Orongorongo Valley, Wellington, New Zealand. *N.Z. J. Zool.* 9: 391-402. — (Ecol. Div., DSIRO, Private Bag, Lower Hutt, NZ). Odon. (Zygoptera) occurred only in the diet of the fantail, which captures its food on the wing. The determination was made on the basis of material in 3 faeces from adult fantails.
- (4497) MORETTI, G., F. CIANFICCONI & P. BALBONI ALESSANDRINI, 1982. Lago Grande e Lago Piccolo: due biotopi minacciati di estinzione. *Acqua-Aria* 1982 (6): 557-573. (With Engl. s.). — (Ist. Zool., Fac. Sci., Univ. Perugia, Perugia, Italy). The ecology and faunal composition of 2 small coastal brackish lakes in the area of Portonovo (AN), Italy, were studied during 1973-74. 5 odon. spp. are listed.
- (4498) MUNDLOS, R., 1982. *Wunderwelt im Stein. Fossilfunde - Zeugen der Urzeit*. 280 pp., incl. numerous (unnumbered) pls. Prisma, Gütersloh. — [ISBN 3-570-06027-6]. — Price: DM 24.-. On p. 186, a photograph is given of 2 unidentified gomphid larvae, from Pliocen of Willershausen (orig. in author's collection).
- (4499) PAVLYUK, R.S. & A. Yu. HARITONOV, 1982. Nomenklatura strekoz (Insecta, Odonata) SSSR. — [The nomenclature of the USSR dragonflies (Insecta, Odonata)]. In: G.S. Zalotarenko, [Ed.], *Poleznye i vrednye nasekomye Sibiri*, pp. 12-42. Nauka, Novosibirsk. (Russ.). — (Second Author: Inst. Biol., Siberian Sect. USSR Acad. Sci., Ul. Frunse 11, USSR-630091 Novosibirsk). The Russian vernacular names are stated, and the etymology of the taxonomic names is given for all USSR odon. taxa, i.e. 3 suborders (incl. Caloptera Zalesky), 10 families, 50 genera, 162 spp., and 77 sspp.

- (4500) RYABKO, B. Ya. & A. Yu. HARITONOV, 1982. Metod postroeniya opredelitel'nykh tablits, obnaruzhivayushchikh i ispravlyayushchikh oshibki. — The method of construction of keys discovering and correcting the mistakes. *Izv. sib. Otdel. Akad. Nauk SSSR (Biol.)* 1982 (1): 124-130. (Russ., with Engl. s.). — (Second Author: Inst. Biol., Siberian Sect. USSR Acad. Sci., Ul. Frunse 11, USSR-630091 Novosibirsk).

This is more or less a modified version of the Engl. paper listed in OA 3837. Most of the mathematical argumentation is here omitted.

- (4501) SUZUKI, K. & TAMAISHI, 1982. Ethological study of two *Mnais* species, *M. nawai* Yamamoto and *M. pruinosa* Selys, in the Hukuriku District, central Honshu, Japan. I. Analysis of adult behavior by marking-reobservation experiments. *J. Coll. lib. Arts, Toyama Univ. (nat. Sci.)* 14(2): 95-128. (With Jap. s.). — (Dept Biol., Coll. Lib. Arts, Toyama Univ., Gofuku 3190, Toyama, 930, JA).

Adult behaviour was studied at the Bessôgawa Creek, Yatsuomachi, May-Aug., 1977. Special reference is made to phenology, sex ratio, recapture rate, longevity, moving distance and to the population density of the 2 spp.

- (4502) YASUDA, K., 1982. *The Japanese haiku: its essential nature, history, and possibilities in English, with selected examples*. Tuttle, Rutland-Vermont-Tokyo. XX+232 pp. [ISBN 0-8048-1096-6].

The dragonfly denotes the seasonal feeling of summer. Several dragonfly haiku (in Engl. translation) are listed. The author is a poet himself, and this is considered the best book on Japanese haiku available for the Westerner, if not perhaps the best book on Japanese poetry in general.

1983

- (4503) ALOUF, N.J., 1983. Contribution à la connaissance des cours d'eau du Liban: la zonation biologique du Nahr Qab Ilias. *Annls Limnol.* 19(2): 121-127. (With Engl. s.). —

(Fac. Sci., Sect. I, Univ. Libanaise, Hadath Beyrouth, Lebanon).

Intermittent and permanent parts of the chalky Nahr Qab Ilias stream, Lebanon were studied. The Plecoptera prevail in the upper part, and the Ephemeroptera dominate in the lower part biocoenoses. The odon. fauna is poor; most specimens were recovered from the lower stations. Quantitative data are given per order/station, but a species list is not supplied.

- (4504) ANDERSON, P., 1983. Dragonflies war on mosquitoes. *Plain Dealer* (Cleveland, Ohio), issue of June 30. — (c/o Laura A. Dowell, Wells Chamber of Commerce, Box 356, Wells, Maine 04090, USA).

A newspaper report on the continuation of the project, described in OA 1910 (with references). Other newspaper articles appeared in Portland, Maine, Press Herald, issue of June 6, 1983, by R. Collins; in the same newspaper, issue of April 29, 1981, by S. Murphy; and in New York Times, issue probably dated June 11 or 12, 1983, anonymous). — (*Abstracter's Note*: The Editors of Odonatologica have received several more clippings of articles on this project, published in 1983 in various US newspapers, but the bibliographic data of these are either incomplete or altogether missing).

- (4505) ANSELIN, A., 1983. Libellules et conservation de la nature. *Bull. R.N.O.B.* 1983 (3): 5-10. — (Diksmuide Heirweg 114, B-8200 Brugge-2).

The status of the Belgian odon. fauna is critically discussed, and some tentative conservation measures are suggested. (*Abstracter's Note*: A Dutch version of this paper has appeared in *Natuureservaten* 39(3): 39-44; 1983).

- (4506) ASAHINA, S., 1983. A new *Macromia* from southern Thailand (Odonata, Corduliidae). *Proc. Jap. Soc. Syst. Zool.* 26: 35-39. (With Jap. s.). — (Takadanobaba 4-4-24, Shinjuku-ku, Tokyo, 160, JA).

M. pinratani sp. n. (♂ holotype, ♀ paratypes: Khao Poh Ta, Ranong, alt. 1000 m, 3-III-1982) is described, figured and its systematic position is discussed. The new sp.

resembles *M. moorei* and *M. enterpe*, and it is probably referable to the westwoodi group, as apparent from its venational characters.

- (4507) BELYSHEV, B.F. & A. Yu. HARITONOV, 1983. O zoogeograficheskikh sootnosheniyah v rayone Kavkazskogo Hrebta. — On zoogeographical correlation in region of Caucasian Mountain Ridge. *Izv. sib. Otdel. Akad. Nauk SSSR (Biol.)* 1983 (1): 85-89. (Russ., with Engl. s.). — (First Author: Ul. Kirova 76-7, USSR-630102 Novosibirsk). The biogeographic composition of the Caucasian odon. fauna (80 spp.) is analysed, and it is argued that the Holarctic-Subholarctic boundary runs across the southern slopes of the Caucasus Mts.
- (4508) BORISOV, S.N., 1983. Novyy vid strekozy roda *Sympetrum* Newman (Odonata, Libellulidae) iz Tadzhikistana. — [A new dragonfly species in the genus *Sympetrum* Newman (Odonata, Libellulidae) from Tadzhikistan]. *Izv. Akad. Nauk tadzhik. SSR (Biol.)* 1983 (2): 68-70. (Russ.). — (Author's address not stated). *S. haritonovi* sp. n. (holotype ♂: Goluboe Lake, Petra Ridge, Tadzhikistan, USSR; 4-VIII-1982; numerous ♂, ♀ paratypes from the same general area) is described, figured, and compared with the allied *S. vulgatum*.
- (4509) BRAUCKMANN, C., 1983. Ein Insektenrest (Odonata, Meganisoptera) aus dem Ober-Karbon des Piesberges bei Osnabrück. *Osnabrück. naturw. Mitt.* 10: 7-14. (With Engl. s.). — (Fuhlrott. Mus., Auer Schulstr. 20, D-5600 Wuppertal-I, FRG). *Erasipterella piesbergensis* gen. n., sp. n., from the Westphalian D, Upper Carboniferous (Silesian) of the Piesberg nr Osnabrück, FRG, is described, figured and compared with *Erasipteron*. The type is the only specimen known (positive and negative impressions of the fore- and hind wings); it is deposited in the Nat. Hist. Mus., Osnabrück. A brief discussion on the biology of the Meganisoptera is added.
- (4510) BRODSKIY, A.K. & V.D. IVANOV, 1983. Functional assessment of wing structure in insects. *Ent. Rev.* 62(1): 35-52. — (Dept Ent., Univ. Leningrad, Universitetskaya naberezhnaya 7/9, USSR-199164 Leningrad). Engl. edition of the paper listed in OA 4401.
- (4511) BURMEISTER, E.-G., 1983. Vorläufige Erfassung einiger von J.B. v. Spix und C.F. Ph. v. Martius in Brasilien gesammelter Insektengruppen aus der Zoologischen Staatssammlung München, die von M. Perty bearbeitet wurden (Blattaria, Odonata, Isoptera, Trichoptera, Heteroptera, Homoptera-Auchenorrhynchi). *Spixiana* (Suppl.) 9: 265-281. (With Engl. s.). — (Zool. Staatssammlung, Maria-Ward-Str. 1b, D-8000 München-19, FRG). The Odon. dealt with are (pp. 269-272) *Zenithoptera fasciata*, *Perithemis lais*, *Nephelidia phryne*, and *Telebasis filiola*. Photographs of lectotype and paralectotype of *N. phryne* are included.
- (4512) CANNINGS, S., 1983. Yukon Insect Project. 1983 field season. *Boreus* 3(2): 6-8. — (Dept Zool., Univ. Brit. Columbia, 6270 Univ. Blvd, Vancouver, B.C., V6T 2A9 CA). A brief report on the Odon. and Hemiptera surveys, incl. references to 7 odon. spp. (Cf. also OA 4233).
- (4513) CHAMBRON, M., 1983. La faune aquatique d'un étang en région parisienne. *Ent. gall.* 1(1): 39. — (29 rue Pierre Corneille, F-95500 Gonesse). *Aeshna grandis* (larvae) is reported from the Godart marsh, Montmorency.
- (4514) CONESA GARCÍA, M.A. & J.E. GARCÍA RASO, 1983. Introducción al estudio de los odonatos de la provincia de Málaga (España). *Actas I Congr. ibér. Entomol., León* 1: 187-206. (With Engl. s.). — (Dep. Zool., Fac. Cien., Univ. Málaga, Málaga, Spain). 37 spp. are listed from the Málaga area, Spain, along with annotations on their ecology, biology and local phenology.
- (4515) CRANBROOK, Earl of & C.M.U. LEH, 1983. A history of zoology in Sarawak.

Sarawak Mus. J. (NS) 32(53): 15-33, pls 6-10 excl. — (Museum, Kuching, Sarawak, Borneo, East Malaysia).

A very informative review, with extensive bibliography. On p. 25, a reference is made to the work of Dr M.A. Liefstinck.

- (4516) DE MARMELS, J., 1983. Hallazgo de Odonata nuevos para Venezuela o poco conocidos. 3. *Boh. Ent. venez.* (NS) 2(19): 155-156. — (Dept. & Inst. Zool. Agric., Fac. Agron., Univ. Central Venezuela, Apdo 4579, Maracay-2101-A, Venezuela).

An annotated list is given of little known spp., among which *Cacoides latro* and *Acanthagrion inexpectum* are new to Venezuela.

- (4517) DEN BOER, P.J., 1983. Het verschijnsel dispersie. — [The phenomenon of dispersal]. *Vkbl. Biol.* 63(16): 310-314. (Dutch). — (Biol. Stn, L.H. Wageningen, Kampsweeg 27, 9418 PD Wijkster, NL).

An attempt is made to define the phenomena, "migration" and "dispersal". With reference to the odon. participation in the "aerial plankton", the work of P.A. Glick (1939, Techn. Bull. U.S. Dept Agric. 673) is quoted.

- (4518) DONATH, H., 1983. Die ehemalige Odonatenfauna im Gebiet des Braunkohlentagebaues Schlabendorf-Süd in der Niederlausitz. *Ent. Nachr. Ber.* 27(3): 123-126. (With Engl. & Russ. s's). — (Jahnstr. 6, DDR-7960 Luckau, GDR).

31 spp. are listed from the said open cast lignite mine, and the fauna is briefly discussed.

- (4519) DONATH, H., 1983. Die Libellenfauna des Naturschutzgebietes Bergen-Weissacker Moor (Insecta, Odonata). *NaturschutzArb. Berlin Brandenburg* 19(2): 55-62. — (Jahnstr. 6, DDR-7960 Luckau, GDR).

The odon. fauna (39 spp.) of the said Nature Reserve (Distr. Cottbus, GDR) is listed and discussed.

- (4520) DONATH, H. & J. ILLIG, 1983. Die faunistische Bedeutung der Gewässer im Unterspreewald. *NaturschutzArb. Berlin Brandenburg* 19(3): 65-69. — (First Author:

Jahnstr. 6, DDR-7960 Luckau, GDR).

The local occurrence of *Calopteryx splendens*, *C. virgo*, *Gomphus flavipes*, *G. vulgatissimus*, *Ophiogomphus serpentinus*, and *Aeshna viridis* is discussed.

- (4521) GERKEN, B., 1983. Zum Status der Helmarjungfer (*Coenagrion mercuriale*; Insecta Odonata) am südlichen und mittleren Oberrhein. *Ber. Arb. Gruppe Naturschutz Freiburg/Br.* 1983 (2): 96-99. — (Univ.-Gesamthochschule Paderborn, An der Wilhelmshöhe 44, D-3470 Höxter, FRG).

The status of *C. mercuriale* in the state of Baden-Württemberg, FRG, is reviewed. The strongest populations are in the Taubergiessen area, but it is feared that the grassland cultivation will exercise a negative impact on the status of this sp.

- (4522) GERKEN, B. & H. BREUNIG, 1983. Schutz und Wiedervernässung eines Moor-komplexes im Schwarzwald. I. Biologisch-ökologische Bedeutung des Moorgebietes und Vorschläge zur Regeneration und Pflege. *Ber. Arb. Gruppe Naturschutz Freiburg/Br.* 1983 (2): 54-71. — (Univ.-Gesamthochschule Paderborn, An der Wilhelmshöhe 44, D-3470 Höxter, FRG).

The ecosystem of a not further specified Hochschwarzwald (FRG) moor complex is analysed and discussed from the conservation point of view. The status of the local odon. fauna is considered in detail.

- (4523) HARITONOV, A. Yu. & I.N. HARITONOVA, 1983. Opyt ispol'zovaniya sadkov dlya ocenki smertnosti nasekomykh pod vozdeystviem insekticidnykh aerorozley. — [An experiment with caged insects to estimate the insect mortality caused by aerosol insecticides]. In: *Optimizaciya tehnologii primeneniya insekticidnykh aerorozley*, pp. 63-73. Vashnil, Novosibirsk. (Russ.). — (Inst. Biol., Siberian Sect. USSR Acad. Sci., Ul. Frunse 11, USSR-630091 Novosibirsk).

The odon. spp. used were *Lestes sponsa*, *Aeshna serrata* and *Sympetrum flaveolum*. The mortality was decreasing in the following sequence: Formicidae (Hym.) — Syrphidae

(Dipt.) — Orthoptera — Odonata — Coleoptera.

- (4524) ITZEROTT, H., M. NIEHUIS, M. WEITZEL, R. KIKILLUS, S. OHLIGER & E. SCHMIDT, 1983. Materialien zur Kenntnis der Libellen (Odonata) von Rheinland-Pfalz unter besonderer Berücksichtigung der bestandsgefährdeten Libellenarten (Stand April 1983). *Beitr. Landespf. Rheinland-Pfalz* 9: 92-106. — (Last Author: Biol. Didaktik, Univ. Bonn, Römerstr. 164, D-5300 Bonn-1, FRG). A checklist is given of the odon. fauna (63 spp.) of the Rhineland-Palatinate prov., FRG. The threatened taxa are thoroughly analysed, and some tentative conservation measures are suggested.

- (4525) KIAUTA, B., 1983. Über das Vorkommen der Südlichen Heidelibelle, *Sympetrum meridionale* (Selys), im Engadin. *Jber. naturf. Ges. Graubünden* 100: 151-156. (With Engl. s.) — (Dept Animal Cytogen. & Cytotaxon., Univ. Utrecht, Padualaan 8, Utrecht, NL). 2 specimens from the high-altitude localities, Lais d'Immez (alt. 2620 m) and Isla Persa (alt. 2710 m), Grisons, Switzerland, are placed on record, a review is given of the high-altitude occurrence of the *Sympetrum* spp. in the Alps, and 2 migratory flights of *S. striolatum* and *S. meridionale* in the central Engadine (1969, 1970) are briefly described and discussed. The latter sp. is not indigenous in the Engadine, and it is argued that most, if not all, *Sympetrum* individuals participating in the Engadine migratory flights are of non-Engadine provenance.

- (4526) LANDMANN, A., 1983. Zum Vorkommen und Status der Feuerlibelle (*Crocothemis erythraea* Brullé, 1832) in Österreich (Insecta: Odonata, Libellulidae). *Ber. nat.-med. Ver. Innsbruck* 70: 105-110. (With Engl. s.) — (Inst. Zool., Univ. Innsbruck, Universitätsstr. 4, A-6020 Innsbruck). A specimen of *C. erythraea* from North Tyrol (Kropfsee, Gurgltal, 20-IX-1982) is placed on record, and its occurrence in Austria is reviewed and discussed. The sp. is known from 7 localities, but it only breeds in Styria and in

the Neusiedlersee area.

- (4527) LÓPEZ GONZÁLEZ, R., 1983. Odonatos de la Sierra de Gredos. Aspectos faunísticos. *Actas I Congr. ibér. Entomol., León* 1: 399-408. (With Engl. s.) — (C/Fontiveros 1, Avila, Spain).

32 spp. are listed from the Sierra de Gredos, Spain, with references to faunal composition and vertical distribution of the taxa concerned.

- (4528) LÜTTMANN, J., 1983. Die Tierwelt des Naturschutzgebietes "Norderteich". *Heimatland Lippe* 76(11): 391-400. — (Author's address not stated).

The paper contains a list of, and a brief discussion on the odon. fauna (14 spp.) of the Norderteich Nature Reserve nr Billerbeck, Lippe, FRG.

- (4529) MARTENS, J.M., 1983. Die Tierwelt im Landkreis Lüchow-Dannenberg: Artenlisten ausgewählter Gruppen. *Abh. naturw. Ver. Hamburg* (NF) 25: 383-409. — (Zool. Inst., Univ. Hamburg, Martin-Luther-King-Platz 3, D-2000 Hamburg-13, FRG).

40 odon. spp. are listed, without any other data, from the Lüchow-Dannenberg district, Hannover area, FRG).

- (4530) MIYAKAWA, K., 1983. Description of the larva of *Calopteryx japonica* Selys, in comparison with *C. virgo* (L.) and *C. atrata* Selys larvae (Odonata, Calopterygidae). *Proc. Jap. Soc. syst. Zool.* 26: 25-34. (With Jap. s.) — (Imafuku 1024, Kawagoe, Saitama, 356, JA).

With reference to the paper listed in OA 4327, the ultimate larval stage of *C. japonica* is described and figured, detailed comparative notes and figs for *C. virgo* and *atrata* are provided, and some considerations on the origin of morphological differences in the 3 spp. are offered. *C. japonica* differs from *C. virgo* in body size, leg length, and in the length of caudal lamellae relative to body length. *C. atrata* is distinct in the head shape, the labium, the caudal lamella, in relative length of the antennal pedicel to the first segment of flagellum, and in that of the median lamella to

the lateral lamellae.

- (4531) MÜLLER, J.P., 1983. Museumsbericht 1981 und 1982. *Jber. naturf. Ges. Graubünden* 100: 31-43. — (Bündner Natur-Mus., Masanserstr. 31, CH-7000 Chur).
Annual report of the Director of the Museum. On pp. 34-35, reference is made to the Exhibition, "Libellen — Kleinodien unserer Gewässer" (Chur: Aug. 17 - Sept. 1981; Davos: Sept. 24 - Oct. 11, 1981; Pontresina: Aug. 24 - Sept. 10, 1982); cf. *OA* 3515. — On p. 36, a brief account is given of the Sixth Int. Symp. Odonatol., hosted by the Museum (cf. *OA* 3400, 4151), incl. the names of the members of the local Organizing Committee: H. Schiess (Chairman), A. Bischof, Dr J.P. Müller, and A. Walkmeister.
- (4532) NIEHUIS, M., 1983. Zum Vorkommen der Torf-Mosaikjungfer (*Aeshna juncea*) im Jahre 1982 in Rheinhessen-Pfalz. *Mainz. naturw. Arch.* 21: 5-15. — (Im Vorderen Grossthal 5, D-6743 Albersweiler, FRG).
The unusual abundance of *A. juncea*, as recorded in 1982 at 13 localities in the Rheinhessen-Pfalz district, FRG, is described and discussed.
- (4533) NIRMALAKUMARI, K.R. & N.B. NAIR, 1983. Final instar nymph of *Urothemis signata signata* (Rambur) from south-west coast of India. *Entomon* 8(2): 193-197. — (Dept Aquatic Biol. & Fish., Univ. Kerala, Trivandrum-695007, India).
The ultimate instar from Trivandrum is described and figured.
- (4534) NITSCH, J., 1983. Lebensraum Kiesgrube. *Tierfreund* 1983 (4): 4-7. — (Author's address not stated).
The magazine is directed at youth. The article deals with the animal life of a gravel pit, a special section (pp. 5-6) is dealing with the Odon. — (For a rounded-off treatment of the subject cf. *OA* 3468).
- (4535) OLSVIK, H., 1983. Noen nye lokaliteter for *Coenagrion armatum* (Charp.) (Odonata: Coenagrionidae) på østlandet. — Some new localities for *Coenagrion armatum* (Charp.) (Odonata: Coenagrionidae) in eastern Norway. *Fauna norv.* (B) 1983: 108-109. (Norw., with Engl. s.). — (Zool. Mus., Sarsgt 1, Oslo-5, NO).
10 new localities are brought on record. It is argued that *C. armatum* may possibly have increased in numbers and spread to new localities, due to the agricultural influence, causing eutrophisation of breeding habitats, required by this sp.
- (4536) PETROV, N.B. & V.V. ALJESHIN, 1983. Geterogennost' i gomologii povtoryayushchey-sya i unikal'noy DNK strekoz (Odonata, Insecta). — Repetitive and unique sequences in the DNA of dragonflies (Odonata, Insecta): intragenomic and interspecific divergence. *Molek. Biol.* 17(2): 345-355. (Russ., with Engl. s.). — (First Author: A.N. Belozersky Lab. Molec. Biol. & Bioorganic Chem., Lomonosov Moscow Univ., Moscow, USSR).
A relative content of unique and reiterated nucleotide sequences in DNA of 11 anisopt. spp. was estimated. The degree of intra- and intergenomic divergence of the DNA sequences was determined by means of DNA-DNA hybridization. Spp. from different genera share 40-45% of the repetitive sequences and those from different families — from 11 to 20% only. Data on the thermostability of homo- and heteroduplexes suggest that new families of the repetitive sequences have arisen repeatedly during odon. evolution. The quantity of homologous unique sequences in the DNA compared (20-97%) correlates with the taxonomic relationships of species. Phylogenesis of some family taxa is discussed in view of the results obtained. (Authors).
- (4537) QJU, J. & Z. LIU, 1983. Studies of the life history of *Prosthogonimus ovatus* and *P. pellucidus*. *Acta zool. sin.* 29(3): 256-266. (Chin., with Engl. s.). — (Dept Parasitol., Bethune Med. Univ., Chang Chun, P.R. China).
The 2 trematodes were studied from 8 localities in the Sichuan Prov., P.R. China. The first intermediate host is *Bithynia fuchsianus*; out of 2551 snails examined, 21 were infected with

xiphidocercariae. 21 odon. spp. are listed as the second intermediate hosts, incl. 7 spp. that were not earlier recorded as vectors of posthoganimiasis.

- (4538) RAUH, H.-P., 1983. Die Libellen (Odonata) des Landkreises Uelzen. *Jb. naturw. Ver. Fstm Lüneburg* 36: 261-268. — (Parkweg 21, D-3111 Eimke-1, FRG).

The odon. fauna (40 spp.) of Uelzen District, Lower Saxony, FRG is listed and brief annotations are provided for each sp.

- (4539) RESH, V.H., 1983. Spatial differences in the distribution of benthic macroinvertebrates along a springbrook. *Aquatic Insects* 5(4): 193-200. — (Div. Ent. & Parasitol., Univ. California, Berkeley CA 94720, USA).

Benthic samples were collected from an unshaded first-order springbrook (Mendocino Co., California, USA), below a permanent spring outflow. *Argia vivida* is the only odon. sp. recorded. Its abundance decreased with the increased distance from the outflow.

- (4540) RODRIGUES CAPITULO, A., 1983. Descripción de los estadios preimaginales de *Erythemis attala* Selys (Odonata, Libellulidae). *Limnobiós* 2(7): 533-548. (With Engl. s.). — (Inst. Limnol., C.C. 55, AR-1923 Berisso, Bs.-As.).

The larval stages are described, figured and discussed, with special reference to the evolution of the mask spines. Notes on the behaviour are also provided.

- (4541) RODRIGUES CAPITULO, A., 1983. La ninfa de *Phyllocycle argentina* (Hagen in Selys) 1878 (Odonata, Gomphidae). *Revta Soc. ent. argent.* 42(1/4): 267-271. (With Engl. s.). — (Inst. Limnol., C.C. 55, AR-1923 Berisso, Bs.-As.).

The male ultimate instar larva is described and figured (Embalse Rio, Córdoba, Argentina).

- (4542) SÄRKKÄ, J., 1983. A quantitative ecological investigation of the littoral zoobenthos of an oligotrophic Finnish lake. *Annls zool. fenn.* 20(3): 157-178. — (Dept Biol., Univ. Jyväskylä, SF-40100 Jyväskylä-10).

The paper deals with the Konnevesi Lake, Finland. The Odon. are hardly considered; *Enallagma cyathigerum* is the only sp. mentioned.

- (4543) SIEPE, A., 1983. Kiesgrube bei Buggingen. II. Schutzwürdigkeit, Biologisch-ökologische Bedeutung und Eignung als flächenhaftes Naturdenkmal. *Ber. Arb. Gruppe Naturschutz Freiburg/Br.* 1983 (2): 13-33. — (Inst. Biol., Univ. Freiburg, Albert Str. 21, D-7800 Freiburg/Br., FRG).

The ecosystem of the gravel pit nr Buggingen, southern Upper Rhine valley, FRG, is analysed, and the faunal inventory (incl. 9 odon. spp.) is presented.

- (4544) SIEPE, A., 1983. Zur aktuellen Bedrohung eines Feuchtgebietes im LSG "Schönberg" bei Freiburg/Br. *Ber. Arb. Gruppe Naturschutz Freiburg/Br.* 1983 (2): 34-37. — (Inst. Biol., Univ. Freiburg, Albert Str. 21, D-7800 Freiburg/Br., FRG).

Aeshna cyanea is recorded from the Schönberg Nature Reserve nr Freiburg/Br., FRG.

- (4545) SIEPE, A., E. TRÖGER, D. SCHMIDT & H. BREUNIG, 1983. Einrichtung eines AGN-Biotopschutzgebietes im Freiburger Stadtwald. *Ber. Arb. Gruppe Naturschutz Freiburg/Br.* 1983 (2): 38-42. — (Inst. Biol., Univ. Freiburg, Albert Str. 21, D-7800 Freiburg/Br., FRG).

The construction, management and fauna of an artificial pond nr Freiburg/Br., FRG, are described. The odon. spp. listed are *Coenagrion puella*, *Ischnura elegans*, *Libellula depressa* and *Sympetrum pedemontanum*.

- (4546) SPITZENBERGER, H.-J., 1983. Zooplankton der Gewässer des Landkreises Lüchow-Dannenberg. *Abh. naturw. Ver. Hamburg* (NF) 25: 357-382. (With Engl. s.). — (Haidland 15, D-2105 Sevetal-1, FRG).

Samples were collected from 14 rivers and ponds in the Lüchow-Dannenberg district, Lower Saxony, FRG. *Ischnura elegans* is reported from a pond in Siemen.

- (4547) STARK, W., 1983. Zum Vorkommen des

- Spitzenflecks *Libellula fulva* (Müller, 1764) im Burgenland (Ins., Odonata: Libellulidae). *Burgenländ. Heimatbl.* 45(4): 189-190. (With Engl. s.). — (Burgenländ. Landesmus., Museumgasse 5, A-7000 Eisenstadt).
The occurrence of *L. fulva* in Burgenland, Austria is received, and 2 new records are presented.
- (4548) SUZUKI, K. & N. METOKI, 1983. Morphometrical analysis of three closely related *Mnais* species in Japan (Odonata, Calopterygidae). I. Variation in crossvein number. *J. Coll. liberal Arts Toyama Univ. (nat. Sci.)* 16(2): 113-171. (With Jap. s.). — (Dept Biol., Coll. Liberal Arts, Toyama Univ., 2190 Gofuku, Toyama-shi, 930, JA).
18 local populations of *M. costalis* Sel., *M. pruinosa* Sel. and *M. nawai* Yamamoto were morphometrically analysed. Many facts and tendencies were revealed for the variability of crossvein number in the species group. Considerably clear differences were found in the variability of crossvein number among the 3 spp. From the viewpoint of the variability in crossvein number, all of *Asahina's* 3 "subspecies" should be regarded as good or independent spp. as the senior author and his co-workers have insisted since 1979. Symmetry-asymmetry relationships in this quantitative character were also analyzed.
- (4549) TIMM, T., 1983. Faunistische Charakterisierung und Bewertung des subkontinentalen Maujahn-Moores in NE Niedersachsen. *Abh. naturw. Ver. Hamburg* (NF) 25: 169-186. (With Engl. s.). — (Luisenstr. 14, D-2000 Hamburg-76, FRG).
The faunal samples from the Maujahn nr Dannenberg, Lower Saxony, FRG are analyzed, incl. various odon. spp.
- (4550) TOVORNIK, D., 1983. Übersicht einiger bio-ökologischer Untersuchungen der Stechmücken-Fauna (Dipt., Culicidae) in Slowenien (Jugoslawien). *Acta ent. jugosl.* 19(1/2): 19-26. (With Slovene s.). — (Zavod za zdravstveno varstvo, Bohoričeva 15, YU-61000 Ljubljana).
The ecology of the culicid fauna (22 spp) of the Ljubljana Moor, Slovenia, Yugoslavia is discussed, and quantitative data are presented on odon. consumption of culicid larvae. The odon. groups involved are *Aeshna*, *Crocothemis*, *Orthetrum*, *Coenagrionidae* and *Lestidae*.
- (4551) VAN BUGGENUM, H.J.M. & J.T. HERMANS, 1983. Het Marissen en omgeving. — A study of "Het Marissen" and its surroundings in Middle Limburg. *Natuurh. Maandbl.* 72(10/11): 206-217. (Dutch, with Engl. s.). — (Second Author: Hertestr. 21, Linne, NL).
A reference is made to 5 odon spp. The locality is situated nr Echt, The Netherlands.
- (4552) WATERHOUSE, D.F., 1983. The Australian National Insect Collection. *Hemisphere* 27(4): 194-199. — (c/o Div. Ent., SCIRO, P.O. Box 1700, Canberra, A.C.T. 2601, AU).
A brief narrative on the history of entomology in Australia. On p. 197, a replica is shown of a drawer (orig. in the Brit. Mus. (Nat. Hist.), London), containing the insects collected in Australia by J. Banks and D. Solander in 1770. This includes 2 odon. specimens.
- (4553) WILKENS, H., 1983. Faunistisch-ökologische Analyse einer Flussmarsch der Mittleren Elbe. *Abh. naturw. Ver. Hamburg* (NF) 25: 151-167. (With Engl. s.). — (Zool. Inst. & Mus., Univ. Hamburg, Martin-Luther-King-Platz 3, D-2000 Hamburg-13, FRG).
The fauna of the Middle Elbe R. fluvial marsh nr Dannenberg (Lower Saxony, FRG) is analysed and evaluated with respect to nature conservation. The pioneer character of *Synetrum pedemontanum* is briefly discussed.
- (4554) WILMOT, B.C., 1983. Masked killers and winged gladiators — an introduction to dragonflies. *Naturalist, Durban* 27(1): 25-33. — (Albany Mus., Somerset St., Grahamstown-6140, RSA).
A very nice "presentation" of the order, directed at the general reader.
- (4555) ZHU H. & J. WU, 1983. Odonata (Insect) I. A survey of the natural enemy. Insect resources in Shanxi (2). *J. Shanxi Univ. (nat. Sci.)* 1983 (4): 75-85. (Chin., with Engl. s.). — (Dept Biol., Univ. Shanxi, Taiyuan, Shanxi Prov., P.R.

China).

This is the first of 2 papers on the Odon. of the Shanxi Prov., P.R. China. It deals with 17 spp. of Platycnemididae, Coenagrionidae, Lestidae, Calopterygidae and Gomphidae.

1984

- (4556) (Anonymous), 1984. Einzigartige Schätze im Musée Robert, Biel. *Drogisten Stern* [Schweiz] 4(1): 2-4.
An outline of the museum collections, with numerous col. figs. For more information cf. OA 4088.

- (4557) (Anonymous), 1984. Headliners [Curtis E. Williams]. *Insight Views Baylor Univ.*, issue of Jan. 23, 1 p. — (c/o C.E. Williams, 704 Foster Str., Marlin, Texas 76661, USA).
A biographic note, with emphasis on C.E. Williams' odonatological work and odon. photography. For more biographic material cf. OA 4458. For an additional brief note with a portrait cf. *Quart. Texas Assoc. Mus.* 9(1): 29 (1984).

- (4558) (Anonymous), 1984. VC's plea to scientists. *Indian Express*, issue of January 24, p. 5.
A daily's account of the First Indian Symposium of Odonatology (Madurai, Jan. 23-25, 1984). The Symposium was organized by Dr S. Mathavan (Madurai Kamaraj Univ.) in conjunction with the SIO National Office in India. For the abstracts of papers cf. OA 4466. Prof. Dr N. Balakrishnan Nair of the Kerala Univ. was elected Honorary Fellows of the Symposium Committee, while some 60 attendants were representing 16 different Indian States.

- (4559) ÅBRO, A., 1984. The initial stylostome formation by parasitic larvae of the water-mite genus *Arrenurus* on zygopteran imagines. *Acarologia* 25(1): 34-45. (With Fr. s.). — (Inst. Anat., Univ. Bergen, Årstadvej 19, N-5000 Bergen).
Arrenurid water-mite larvae, ectoparasitic on zygopteran imagines, attach themselves to the host's cuticle and pierce it with the cheliceral blades to obtain the host's tissue fluids.

Promptly after anchoring in feeding position, secretions of the larval mite are forced into the host beneath the attachment site, where a subcuticular vesicle, bounded by a delicate gelatinous membrane, appears in the epidermis layer. The vesicle constitutes a local space of thin fluid into which the larva ejects a liquid that rapidly gels and forms a slender resilient blind sac, the stylostome. The vesicle provides a buffer zone for the nascent stylostome, protecting it against vehement defence reaction on the part of the host. The early stylostome undergoes a phase of extreme inflation of the distal thin-walled portion, which is associated with expansion of the primary vesicle. Epidermal cells adjoining the primary vesicle undergo lysis and fuse with the vesicle, transforming it into an epidermal abscess, whose cell juice acts as a pool of nutrient to the larval mite. Initially short, wrinkled and thin-walled, the stylostome increases in size, elongating and remodelling as larval engorgement proceeds. Eventually the stylostome breaks the rim of the abscess, which becomes modified to a melanized sleeve around the origin of the stylostome. When fully formed, the stylostome is mostly lodged in a cleft in the epidermis separated from the haemocoel and deeper tissues by the sheet of epidermal basal lamina. The delicate meshwork of the basal lamina, closely applied to the outside of the stylostome, seems to prevent haemocytic reactions to the stylostome in later developmental stages.

- (4560) BELLE, J., 1984. *Orthetrum trinacia* (Selys) new to the fauna of Spain, with records of three other afrotropical Odonata Anisoptera. *Ent. Ber., Amst.* 44(5): 79-80. — (Onder de Beumkes 35, 6883 HC Velp, NL).
Besides *O. trinacia*, *Hemianax ephippiger*, *Brachythemis leucosticta* and *Trithemis annulata* were collected in the province of Huelva, Spain. The Iberian provenience of all of these is evidenced by the presence of teneral individuals. The records support the hypothesis on the recent range increase of the African spp. to the Iberian Peninsula.
- (4561) BERLOCHER, S.H., 1984. Insect molecular

systematics. *Ann. Rev. Ent.* 29: 403-433. — (Dept Ent., Univ. Illinois, Urbana, Ill. 61801, USA).

The subject is order-wise reviewed. The very brief section on the Odon. is solely based on the work listed in OA 2262.

- (4562) BUCHWALD, R., B. GERKEN, K. SIEDLE & STERNBERG, 1984. 2. *Sammelbericht über Libellenvorkommen (Odonata) in Baden-Württemberg. Stand: März 1983*. Schutzgemeinschaft Libellen in Baden-Württemberg, Höxter. IV+56 pp. — (Available free from Dr B. Gerken, An der Wilhelmshöhe 44, D-3470 Höxter, FRG).

An updated version of the work listed in OA 2928.

- (4563) CORBET, P.S., [Ed.], 1984. Current topics in dragonfly biology. *Soc. int. odonatol. rapid Comm.* (Suppl.) 2: X+46 pp. — (Dept Biol., Univ. Dundee DDI 4HN UK). — The booklet is available from the Editors of Odonatologica, Dept Anim. Cytogen. & Cytotaxon., Univ. Utrecht, Padualaan 8, Utrecht, NL. — Price: Hfl. 20.- net.

This is the transcript of the tape-recorded discussion, conducted during the "Corbet Seminar", in the framework of the VIIth Int. Symp. Odonatol., Calgary, August 1983. It contains contributions by S. Asahina, G.H. Bick, R.A. Cannings, K.J. Deacon, S.W. Dunkle, R.W. Garrison, K. Higashi, D.F.J. Hilton, D.M. Johnson, B. Kiauta, R.C.P. Lee, M. Leggott, P.E. Lutz, M.L. May, N.W. Moore, U. Norling, M.J. Parr, D.R. Paulson, J. Pickup, J.-G. Pilon, G. Pritchard, H.M. Robertson, E. Schmidt, K.J. Tennessen, S. Valley, M.T. Wasscher, and M.J. Westfall. The main text and the arrangement of the subjects discussed was prepared by P.S. Corbet. The discussion material is organized in the following chapters: "Cues for habitat selection", "Breeding in small containers", "Tolerance of larvae to pH and salinity", "Drought resistance in larvae", "Use of larvae for biological control", "Dragonflies as indicators for environmental impact assessment", "Adult feeding by gleanng", "Adaptive significance of synchronous emergence", "Co-

hort-splitting and diapause in larval populations", "Diagnosis of diapause in larvae", "Maiden flight of *Pantala flavescens*", and "Causes of damage to cerci of adult aeshnids". Bibliography, Addresses of contributors, and indices to contributors, cited authors, and to Odonata are also provided. — (*Abstracter's Note*: The seminars, "Current topics in dragonfly biology", organized by Professor Corbet, are one of the regular programme features of the International Symposia of Odonatology. The first took place during the Kyoto Meetings (1980), the Chur seminar (1981) was the first to be thoroughly tape-recorded, and it is the objective of SIO to have the transcripts from Calgary on published in the present series).

- (4564) DOMMANGET, J.-L. & M. MARTINEZ, 1984. Les odonates de Corse: considérations générales et synthèse des données actuelles. *Entomologiste* 40(1): 27-36. — (First Author: 7 rue Lamartine, F-78390 Bois d'Arcy). The odon. fauna (35 spp.) of the Island of Corsica is listed and analyzed.

- (4565) DUMONT, H.J. & K. MARTENS, 1984. Dragonflies (Insecta, Odonata) from the Red Sea Hills and the main Nile in Sudan. *Hydrobiologia* 110: 181-190. — (Inst. Zool., Univ. Ghent, Ledeganckstr. 35, B-9000 Gent). 21 spp. are recorded, the majority of which are of afrotropical origin, but wide-ranging and tolerant of strongly fluctuating environmental conditions. A small but significant fraction is restricted to the Nile Valley, and another fraction, found only in the Red Sea Hills, is composed of Eremian species of Palaearctic origin. Besides adults, the last-instar larvae of *Pseudagrion niloticum* and of *Paragomphus pumilio* are described and figured.

- (4566) EDA, S., 1984. Chronicle of Japanese odonatology in 1983. *Nature & Insects* 19(3): 19-26. — (Jap., with Engl. title). — (3-4-25 Sawamura, Matsumoto, Nagano, 390, JA). A rather detailed narrative on the 1983 Japanese achievements in odonatology, with numerous references to the Japanese 1983 literature. — (*Abstracter's Note*: The OA

coverage of Japanese literature is incomplete and to a great extent unsystematic. Between 1972-1983 the *OA* Editor sent approx. 650 personal letters and circular copies, the latter in Japanese, to a huge number of Japanese workers in order to achieve at least a moderately reasonable coverage of the local literature. With a few exceptions, the response continues to be negligible. Since, for technical reasons, the SIO National Office in Japan is unable to monitor the Japanese literature systematically, no significant improvement is expected in the foreseeable future. A detailed report on this situation will be presented at the VIIIth Int. Symp. Odonatol., Paris, 1985).

- (4567) *FRASERIA. Newsletter of the S.I.O. National Office in India*, Ukai, No. 6 (June 1, 1984). — For the order conditions cf. *OA* 3425. — (c/o Dr B.K. Tyagi, Malaria Res. Cent., I.C.M.R., Ukai-394680, Distr. Surat, Gujarat, India).

In addition to some personal news items, there are the following articles: *Tyagi, B.K.*: First Indian Symposium of Odonatology (21-24; official report on the conference); — *Srivastava, B.K. & B. Suri Babu*: Some observations on oviposition of *Ischnura aurora* (Brauer) in Indian biotopes (Zygoptera: Coenagrionidae) (24); — *Prasad, M. & R.K. Thakur*: On a collection of Odonata from Gujarat State, India (24-25); — *Kumar, A.*: On the first record of dragonflies (Insecta: Odonata) from Ladakh (Jammu and Kashmir), India (25-26); — *Tyagi, B.K.*: Book Review: A text book of insect morphology, physiology and endocrinology, by D.B. Tembhare (26); — Dragonfly songs in India? (26); — Dr M.A. Lieftinck octogenarian (26); — Second Indian Symposium of Odonatology [Announcement] (26); — *Mathavan, S.*: Acknowledgement of the Convener of the First Indian Symposium of Odonatology (27); — *Anonymous*: Indian Bibliography Scheme. Odonatological bibliography of Dr D.B. Tembhare (27-28); — *Tyagi, B.K.*: New S.I.O. publications (28).

- (4568) GIBBS, K.E., T.M. MINGO & D.L. COURT-MANCH, 1984. Persistence of carbaryl (sevin-4-oil R) in woodland ponds and its

effects on pond macroinvertebrates following forest spraying. *Can. Ent.* 116: 203-213. (With Fr. s.). — (Dept. Ent., Univ. Maine, Orono, Maine 04469, USA).

The impact of an experimental aerial application of carbaryl on the macroinvertebrate fauna of woodland ponds was studied in northern Maine. The most severe and persistent impact was on the Amphipoda. Numbers of immature Ephemeroptera and Trichoptera were reduced immediately following spray application, but this impact did not persist throughout the season nor into the following year. Numbers of immature Odon. were reduced following treatment and remained low during the following year. The chironomids did not appear affected either as immatures or emerging adults.

- (4569) *GRACILE* [Newsletter of Odonatology]. Published by the Kansai Research Group of Odonatology, Osaka, No. 32 (Apr. 1, 1984). (Jap., with Engl. titles). — Annual subscription/membership for 1984: ¥ 3000.-. — (c/o K. Tani, 129 Jizo-cho, Nara, JA).

The issue is dedicated to the memory of Isamu Hiura (deceased Oct. 18, 1983), bearing his portrait on the cover. — Contents: *Tani, K.*: In memoriam Mr. I. Hiura, a good leader of the K.R.G.O. (1-5, with his bibliography); — *Inoue, K.*: Mr. I. Hiura, father of the K.R.G.O. in memoriam (6-7); — *Obana, S.*: Never to recur in my life time (8); — *Tsuda, S.*: Mr. Hiura in memoriam (9-10); — *Anaze, N.*: I remember the trips with Mr. I. Hiura (10); — *Kimura, T.*: Mr. Hiura in memoriam (11-13); — *Yamashita, Y.*: Thanks for Mr. Hiura (14); — *Miyazaki, I.*: Mr. I. Hiura in memoriam (15-16); — *Muraki A.*: A fragment to the late Mr. Hiura (16-17); — *Ichii, H.*: Where shall I go tomorrow? (18-19); — *Matsuda, I.*: Mr. I. Hiura in memoriam (19); — *Westfall, M.J.*: A letter of condolence to Mrs. Hiura from Prof. Dr. M.J. Westfall. President S.I.O. (20-21: facsimile of the Engl. letter and its Jap. translation); — *Hiura, I.*: On the phenology and observations on flight of *Pantala flavescens* in 1983 (22-24); — *Sympetrum striolatum imitoides* caught in Ibaragi, Osaka Prefecture (25); — *Hiura, I. & H. Ichii*:

- Platynemesis foliacea sasakii* inhabiting Hokusetsu Mountains (25-27); — *Obana, S.*: A tentative consideration on Japanese *Mnais* evolution. Part 2 (28-35); — *Tominaga, O.*: Report on the survey trips for *Mnais pruinosa* (36-40); — *Anaze, N.*: Odonate fauna of Minachi, Hongu-cho, Higashimuro-gun, Wakayama Prefecture (41-44); — *Obana, S. & H. Ichii.*: A survey trip for *Oligoaeschna kunigamiensis* and *Gomphus amamiensis okinawanus* (45-46); — *Obana, S.*: Report on the survey trips for *Mnais pruinosa* in Okayama Prefecture (46-48); — *Obana, S., S. Tsuda, C. Tabata, H. Ichii & T. Takeuchi.*: Report of the survey trip of *Sinogomphus flavolimbatus* (49-54); — *Ichii, H.*: Oviposition of *Sinogomphus flavolimbatus* (54); — *Muraki, A.*: Report on the survey trips for *S. depressiusculum*, *S. cordulegaster* and *A. mixta* in Fukui and Ishikawa Prefectures (55-57).
- (4570) GRENZ, M., 1984. Ein junger Feuchtbiotop im Varrelbuscher Fuhrenkamp. *Jb. Oldenburger Münsterland* 1984: 221-229. — (Westerlandstr. 15a, D-4590 Cloppenburg, FRG). 23 Odon. spp. are listed and their abundance at Varrelbusch, Münsterland, FRG is stated.
- (4571) HULDÉN, L., [Ed.], 1984. A checklist of the Finnish insects. Small orders. *Notul. entomol.* 64(1): 1-29. — (Zool. Mus., Univ. Helsinki, P. Rautatiekatu 13, SF-00100 Helsinki-10, Finland). 51 odon. spp. are listed (pp. 8-9, by Vesa Varis; author's address not stated).
- (4572) KIAUTA, B., 1984. Aktuelle Probleme der Zytotaxonomie, erläutert an Beispielen bei südasiatischen Prachtlibellen (Odonata: Chlorocyphidae) und schweizerischen Köcherfliegen (Trichoptera: Limnephilidae), mit Bemerkungen über die Bedeutung der Zytotaxonomie für die Umweltforschung. *Opusc. zool. flumin.* 1: 1-20. (With Engl. s.). — (Dept Animal Cytogen. & Cytotaxon., Univ. Utrecht, Padualaan 8, Utrecht, NL). The position of cytotaxonomy in systematics is stated, the nature and kinds of cytotaxonomic characters are defined and the cytogenetic system of the Chlorocyphidae is outlined and discussed with emphasis on the cytophylogeny, phylogeny and biogeography of the family. Chromosome numbers and TCL of taxa examined are decreasing with increasing distance (in space and time) from those taxa considered to represent the original stock of the family. The variation in the recombination index is discussed in relation to autecology and (expansion of the) geographic range, and is found to be connected with infraspeciation rather than with the systematic position of the taxa concerned. Examples from the Swiss odonate fauna are listed and a brief reference is made to a comparable situation in Trichoptera. An application of cytotaxonomic insights to the study of ecological potentials of taxa threatened by extinction due to anthropogenic impact is tentatively suggested.
- (4573) KUMAR, A. & V. KHANNA, 1984. A review of the taxonomy and ecology of Odonata larvae from India. *Oriental Insects* 17 [1983]: 127-157. — (Northern Regional Stn, Zool. Surv. India, 13 Subhas Rd, Dehra Dun-248001, U.P., India). The collecting, rearing and preservation of odon. larvae are briefly described, the morphology and biology are summarized, the superfamilies and families of the Indian fauna are keyed, and a checklist and a habitat preferences table of 102 Indian spp. are given. A moderately comprehensive bibliography is presented, and some general morphological features of a number of Indian taxa are figured.
- (4574) LAM, E., 1984. De libellen van Noord-Drenthe. — [Dragonflies of northern Drenthe]. *Stridula* 8(1): 37-64. (Dutch). — (Van Lenneplaan 6, 1217 NC Hilversum, NL). 35 spp. are listed, their provincial distribution is mapped, and the 1983 status of each sp. is compared with that recorded in 1975. From the point of view of conservation, the status of the odon. fauna of northern Drenthe, The Netherlands, is considered satisfactory.
- (4575) LIBELLULA. *Mitteilungsblatt der Gesellschaft deutschsprachiger Odonatologen*

(GdO), Vol. 3, No. 1/2 (Jan., 1984). Edited by E. Schmidt, R. Rudolph, H. Heidemann & B. Gerken. — Annual subscription: DM 25.-, representing the 1984 GdO membership fee; DM 10.- for senior citizens, students and unemployed persons. Orders/Membership Applications to: Prof. Dr R. Rudolph, Biologie Didaktik, Univ. Münster, Fliednerstr. 21, D-4400 Münster, FRG).

Hölzer, A.: Chemische Wasseranalyse in Moorwasser und ihre Problematik (1-9); — Lehmann, G.: Möglichkeiten der Erhebung und Darstellung der Abundanz bei Libellen (10-19); — Kaiser, H.: Bestimmung der Populationsdichte von Aeshniden am Beispiel von *Aeshna cyanea* Müller (20-31); — Beck, P. & K. Frobelt: Ein einfacher Erfassungsbogen für Libellenhabitate und seine Auswertungsmöglichkeiten (32-37); — Dreyer, W.: Zeitliche und räumliche Strukturpräferenzen als Erschwernis bei Bestandserhebungen von Libellen (Odonata) (38-40); — Schmidt, E.: Möglichkeiten und Grenzen einer repräsentativen Erfassung der Odonatenfauna von Feuchtgebieten bei knapper Stichprobe (41-49); — Lehmann, G.: Hinweis auf eine einfache, wirksame Methode zur Erhaltung roter Körperfarben bei Libellen (50); — Heidemann, H.: Beitrag zur Fotodokumentation heimischer Odonaten — *Aeshna mixta* Latr., *Aeshna juncea* L. und *Ophiogomphus serpentinus* Charp. (51-52); — Schmidt, E.: Fotonotizen zur Biologie heimischer Odonaten I (53-54); — Landmann, A.: Die Libellenfauna eines subalpinen Hochmoorkomplexes in den Salzburger Zentralalpen (Österreich) (55-64); — Libellenfauna des Bundeslandes Salzburg (Österreich) — eine Übersicht über den derzeitigen Erforschungsstand (65-74); — Siedle, K.: Die Libellen des Pfrunger Riedes — Ergebnis einer Untersuchung aus dem Jahr 1982 (75-84); — Dirnfeldner, L.: Beitrag zur Libellenfauna der Charlottendorfer Teiche bei Schwandorf (Oberpfalz/Bayern) (85-88); — Schmidt, E.: *Aeshna subarctica* Walker im NSG "Heiliges Meer" / Westfalen (89-90); — Banse, G., K. Kuhn & W. Banse: Beobachtungen von *Cercion lindenii* in Bayern (91-94); — Rudolph, R.: Neue Nachweise seltener Libellen in

Westfalen (95-96); — Bauschmann, G.: *Gomphus pulchellus* Selys (Insecta Odonata) in Mittelhessen (97-99); — Von Hagen, H.: Unfalltod bei *Calopteryx splendens* Harris (100-102); — Rudolph, R.: Buchbesprechung: D.C. Geijskes & J. van Tol, *De Libellen van Nederland* (103-104); — Anonymous: Errata zu *Libellula* 2(1/2) (105); — Tagungsprogramm zur 4. Jahrestagung deutschsprachiger Odonatologen und Libellenfreunde in Coburg/Bayern (26./27. 2. 1983) (106); — Ziele und Aufgaben der Gesellschaft deutschsprachiger Odonatologen (GdO) (107); — Schmidt, E.: Nachruf auf Prof. Dr. Joachim Illies (23. 3. 1925 - 2. 6. 1982) (108-112, with portrait).

- (4576) *LINDENIA. Notiziario dell'Ufficio Nazionale Italiano della Società Odonatologica Internazionale*, Roma. No. 1 (Jan. 1, 1984). — Free for the Italian members and subscribers of the International Odonatological Society (S.I.O.); all others: US \$ 1.- per issue (non-Italian orders to the Editors of Odonatologica) — (c/o Dr C. Utzeri, Ist. Zool., Univ. Roma, Viale dell'Università 32, I-00185 Roma). The newsletter appears semiannually and serves as a vehicle for communication among Italian workers. The following notes appear in the present issue: "Ufficio Nazionale della S.I.O. aperto in Italia", "Principali compiti dell'Ufficio Nazionale Italiano della S.I.O.", "La Societas Internationalis Odonatologica (S.I.O.)", "A proposito del notiziario 'Lindenia'", and book reviews of the volumes listed in OA 4525, 4291.

- (4577) LOMHOLDT, O., P. NIELSEN & K. SCHNACK, [Eds], 1984. Entomologisk litteratur: en hjælp til studiet af den danske insektfauna. — Entomological literature. *Ent. Meddr* 51(1/2): 1-85. (Danish, with Engl. s.). — (Dept Ent., Zool. Mus., Universitetsparken 15, DK-2100 Copenhagen). Annotated, order-wise organized bibliography of works considered of importance for the students of Danish insect fauna. (Odon.: pp. 18-19, by P. Nielsen).
- (4578) MATTHES, W., 1984. Zur Erinnerung an Heinz Itzerott. *Naturschutz & Ornithol.*

Rheinland-Pfalz 3(1): 204-208. — (Author's address not stated).

Obituary for, and an appreciation of the work of H. Itzerott (born: Dec. 12, 1912; deceased: 1983; odonatologist, mycologist and nature photographer), with a portrait and bibliography.

- (4579) [MOORE, N.W.], 1984. [The third meeting of the] Odonata [Specialist Group, Species Survival Commission, IUCN.]. *News! Species Survival Commis.* (0)3: 32-33. — (Farm House, Swavesey, Cambridge CB4 5RA, UK). The meeting took place in conjunction with the VIIth Int. Symp. Odonatol., Calgary, Canada, Aug. 1983. New studies were proposed on *Mecistogaster asticta* in Brazil, *Phyllostes ethelae* in Hispaniola, *Metaphya elongata* in New Caledonia, *Amphipteryx agrioides* in Central America, and *Oreocnemis phoenix* in Malawi. It was recommended that the first 2 spp. are listed as Endangered and Vulnerable resp. in the Red Data Book. The Japanese taxa, *Libellula angelina* and *Mortonagrion hirosae* were also recommended for inclusion in the Red Data book as Endangered. It was agreed that the time is now ripe to produce a World List of Odon., incl. distributional data and conservation requirements, and that the project has absolute conservation priority.
- (4580) MORIN, P.J., 1984. The impact of fish exclusion on the abundance and species composition of larval odonates: results of short-term experiments in a North Carolina farm pond. *Ecology* 65(1): 53-60. — (Dept Biol. Sci., Nelson Biol. Lab., P.O. Box 1059, Piscataway, NJ 08854, USA). Under natural conditions in a man-made farm pond, a single small sp. *Perithemis tenera*, numerically dominates a littoral assemblage of larval dragonflies. Censuses of exuvia of larvae metamorphosing from the pond in three successive years demonstrated a consistent negative correlation between numerical in the assemblage and species-specific size in the final larval instar. This pattern suggested that size-dependent processes, such as vertebrate predation, might structure the odon. assemblage. — Exclusion of vertebrate predators from patches of emergent vegetation by screen enclosures for 3 mo increased total abundance of larval odon. by an order of magnitude. Dominance shifted from small spp. to spp. of intermediate size, especially *Pachydiplax longipennis*, where fish were excluded. The largest spp. remained rare and were unaffected by fish exclusion. Four odon. spp. were facultatively multivoltine, completing larval development within 1-2 mo after colonization of the fish enclosures. Fish exclusion also increased the abundance of large microcrustacea, especially the cladoceran *Simocephalus serrulatus*. Large microcrustacea increased in abundance despite a corresponding increase in the abundance of their macroinvertebrate predators, where fish were excluded. — The usual dominance of small *Perithemis* in this assemblage was a probable consequence of differentially heavy predation by fish on moderate-sized species, and the unexplained failure of large species to recruit well under experimental or natural conditions. These results support the general importance of predation in structuring freshwater communities and document an important mode of population regulation operating during the aquatic larval phase of the odon. complex life cycle.
- (4581) NIEHUIS, M., 1984. Verbreitung und Vorkommen der Libellen (Insecta: Odonata) im Regierungsbezirk Rheinhessen-Pfalz und im Nahetal. *Naturschutz & Ornithol. Rheinland-Pfalz* 3(1): 1-203. — (Im Vorderen Grossthal 5, D-6743 Albersweiler, FRG). Monographic treatment of the odon. fauna (59-60 spp.) of the Palatinate and adjacent areas, FRG, with emphasis on ecology and conservation. The material originates from 880 localities.
- (4582) PRYSWITT, K.-P., 1984. Zur Verbreitung der Libellen für die Messischblätter Steimbke und Schwarmstedt 1982 und 1983. Rodewald, privately published. 31 pp. — (Hauptstr. 132, D-3075 Rodewald, FRG). Statistical treatment of the odon. fauna (32 spp.) of the Steimbke and Schwarmstedt areas nr. Hannover, FRG.

- (4583) SCHNEIDER, W., 1984. Zum Nachweis von *Gomphus pulchellus* Selys 1840 in Jugoslawien (Odonata: Anisoptera: Gomphidae). *Ent. Z., Frankfurt/M.* 94(8): 109-111. (With Engl. s.). — (Inst. Zool., Univ. Mainz, Saarstr. 21, D-6500 Mainz, FRG). *G. pulchellus* is reported from Rabac, Istria (Croatia, Yugoslavia). This is the easternmost record of this sp. The male copulatory apparatus and terminalia are figured.
- (4584) SELYSIA. *Newsletter of the Societas Internationalis Odonatologica*. Vol. 13, No. 1 (March 1, 1984). Compiled by M.J. Westfall & M.S. Westfall, Dept Zool., Univ. Florida, Gainesville, Fla). — (c/o Dr M.J. Westfall, Jr, Dept Zool., Univ. Florida, Gainesville, Fla 32611, USA).
Editorial: Selysia becomes official newsletter of S.I.O. (1); — *Dunkle, S.W.*: Seventh International Symposium of Odonatology (1-4); — *Pilon, J.-G.*: Minutes of the Business Meeting Societas Internationalis Odonatologica (S.I.O.) held at University of Calgary, Alberta, Canada, 18 August 1983 (4-7); — *Anonymous*: Nominations for Council, 1985-1987 (7); — *Moore, N.*: Odonata Specialist Group (7-8); — *Legrand, J.*: Eighth International Symposium of Odonatology: Advance announcement (8-9); — *Tennessen, K.J.*: North American Odonata Collectors' Meeting (9); — *Anonymous*: First Indian Symposium of Odonatology (10); — *Fraseria* (10); *Contactblad* (10); — New national newsletter of S.I.O. (10-11); — Dragonfly correspondence cards (11); — Commemorative issues of *Odonatologica* (11); — British Dragonfly Society publications (11-12); — New Code to be published (12); — Revision of The dragonflies of Great Britain and Ireland (12); — Report Odon. Specialist Group (I.U.C.N.) (12); — Dragonflies of Botswana (12); — *Fincke, O.M.*: Lifetime mating patterns and reproductive success in the damselfly *Enallagma hageni* (Walsh) (Odonata: Coenagrionidae) [abstract of doctoral dissertation] (13); — *Waringer, J.*: The effect of water temperature on embryonic and larval development of *Coenagrion puella* L. from a pond at Herzogenburg (Lower Austria) [editorial erratum] (13-14); — *White-Cross, T.*: Behavior observations in Odonata (14); — *Anonymous*: North American Anisoptera exchange [J. Daigle] (14); — Odonata records for Maryland desired [M. Scoville] (14); — Polythore study [G. Bick & J. Bick] (14-15); — Additions and changes to list of S.I.O. members (15-16); — Dr Isamu Hiura of Japan deceased (17).
- (4585) SPEIGHT, M.C.D. & J. LEGRAND, 1984. *Coenagrion lunulatum* (Odonata): morphology of the female and notes on a second Irish colony. *Ir. Nat. J.* 21(6): 237-242. (With Fr. s.). — (First Author: Res. Br., Forrest & Wildl. Serv., Sidmonton Place, Bray, Co. Wicklow, Eire).
 A population of *C. lunulatum* from Scragh Bog, central Ireland is recorded, the odon. fauna (13 spp.) of this locality is listed, and the female morphological features of *C. lunulatum* are described in detail and figured. (For the first Irish record of this sp. cf. OA 4156).
- (4586) TAYLOR, A., 1984. The fly box. *N.Z. Field & Stream* 1(3): 28-29. — (Author's address not stated).
 The tactics and the tyings are described for trout fishing by means of dragonfly larvae imitations. (Cf. also OA 4428).
- (4587) TEN HAKEN, B., 1984. Rustplaatsenkeuze van enkele libellen soorten — [Roosting site selection in some dragonfly species]. *Stridula* 8(1): 32-34. (Dutch). — (Lipperkerkstr. 365, 7533 AC Enschede, NL).
 The kind and size of roosting sites in *Calopteryx splendens*, *Lestes sponsa*, *Ischnura elegans* and *Enallagma cyathigerum* are statistically analysed. The choice of plant spp. and plant organs is peculiar to a certain dragonfly sp., while the absolute size of the roosting site (e.g. the width of a leaf) is not directly related to the size of the dragonfly.
- (4588) THEISCHINGER, G. & J.A.L. WATSON, 1984. Larvae of Australian Gomphomacromiinae, and their bearing on the status of the Synthemis group of genera (Odonata: Corduliidae). *Aust. J. Zool.* 32: 67-95. — (First

Author: 20 Leawarra St., Engadine, N.S.W. 2233, AU).

The descriptive information available on the larvae of the Australian Gomphomacromiinae is summarized. The larvae of *Austrocordulia leonardi* Theischinger, *A. refracta* Tillyard, *Hesperocordulia berthoudi* Tillyard, *Lathrocordulia metallica* Tillyard, and ?*Pseudocordulia* sp. are briefly redescribed and refigured. The larvae of *Apocordulia macrops* Watson, *Archaeophya adamsi* Fraser, *A. magnifica* Theischinger & Watson, *Austrocordulia territoria* Theischinger & Watson, *Austrophya mystica* Tillyard, *Micromidia atrifrons* (McLachlan) and of a possibly new species of *Micromidia* (*Micromidia* sp. "1") are described for the first time. The known larvae of the Australian Gomphomacromiinae are keyed. Two groups are recognized in the Gomphomacromiinae, the larvae of the Gomphomacromia group (including Gomphomacromia, Archaeophya and ?*Pseudocordulia*) having strongly synthemistid facies whereas those of the *Oxygastra* group (including the other genera of Gomphomacromiinae) are more typically corduliid; the venation of the adults also differs. Synthemis and its allies are, therefore, relegated to subfamilial status in the Corduliidae, adjacent to the Gomphomacromia group.

- (4589) WATSON, J.A.L., 1984. A second Australian species in the *Orthetrum sabina* complex (Odonata: Libellulidae). *J. Aust. ent. Soc.* 23(1): 1-10. — (Div. Ent., CSIRO, P.O. Box 1700, Canberra, A.C.T. 2601, AU).
O. serapia sp. n. (♂ holotype: Cooktown, Qld,

12-X-1980; ANIC Type No. 9885) is described, figured and compared with extralimital material (Sulawesi, Moluccas, West Irian, Papua New Guinea, Philippines, Solomon Islands). *O. sabina* (Dru.) is redescribed and a neotype is designated for it. The range of *O. serapia* extends from the SW Pacific to, apparently, the Philippines where, as in Australia and New Guinea, overlaps that of *O. sabina*.

- (4590) WOLF, L.L. & E.C. WALTZ, 1984. Dominions and site-fixed aggressive behavior in breeding male *Leucorrhinia intacta* (Odonata: Libellulidae). *Behav. Biol. Sociobiol.* 14(2): 107-115. — (Dept Biol., Syracuse Univ., Syracuse, New York 13210, USA).
 The aggressive spacing behaviour in male *L. intacta* is characterized by variations in the probability of chasing conspecific male intruders within a defined area around a male's perch. The chase probability depends on the total intruder pressure and the behaviour and distance of the intruder from the perched male. This nonexclusive, site-fixed area is called a dominion. The distribution of intruders among the various behaviour-distance categories was also examined. Chase rates (per 15 min) were correlated mostly with number of intruders that hovered (rather than flew) close to the territorial male. With reference to the impact of the changing chase probabilities on the variation in aggressive interactions as a function of intruder pressure it is concluded that, to some extent, territorial males stabilize defense costs across a variety of intruder pressures by maintaining dominions.