

ODONATOLOGICAL ABSTRACTS

1976

- (11931) SHEVCHENKO, N.N., 1976. Dinamika invazii vodnyh bespozvonochnyh Severskogo Donca gel'mintami v raznye gody. — [Dynamics of "helminth" infestation in aquatic invertebrates of the Severski Donec in various years]. *Tez. Dokl. 2 vsesoyus. Simp. Bolez. Parazit. vodnyh Bespozvon.*, Leningrad, p. 73. (Russ.). — (Author's current address unknown). Metacercariae (Trematoda) of *Pleurogenoides medians*, *Prostotocus confusus*, and *Pleurogenes claviger* are reported from larval dragonflies. *P. confusus* was particularly numerous in *Sympetrum flaveolum*.

1977

- (11932) ANIMA, No. 52 (July 1977). The issue contains a collection of feature articles, titled "The world of dragonflies" (pp. 5-43), compiled and edited by S. Ishida. (Jap., with a brief Engl. description of the issue contents). — (Publishers: Heibonsha, 4 Bancho 4, Chiyoda/ku, Tokyo, 102-0081, JA).
Ishida, S.: *Macromia a. amphigena*, ♂ (cover phot.); — *Ishida, S.*: Feature articles on the world of dragonflies (pp. 5-16; editorial introduction & Review); — *Ishida, S.* [text] & *T. Okumura* [drawings]: Habitat segregation in Japanese dragonflies, in a central Honshu district in summer (pp. 14-15); — *Mizuta, K.*: Science of dragonfly catching: how damselfly females appeal to the males (pp. 17-23); — *Ubukata, H.*: Territorial behaviour in Mnais: occupation of a territory for copulation (pp. 24-29); — *Higashi, K.*: Sturdy carnivorous insects: their feeding behaviour (pp. 30-35); — *Hisada, M.*: Dragonfly flight mechanism (pp. 36-40); — *Asahina, S.*: Dragonfly ancestors (p. 41); — *Sasaki, Y.*: An essay on *Anax parthenope junius* (p. 42); — *Hasegawa, H.*: Dragonflies drawn by a samurai (p. 43). — Numerous splendid photographs, wa-

tercolour paintings and other artwork are enhancing greatly the attractiveness of this issue. Some of the photographs were contributed by *S. Ishida*, *K. Unno* and *Y. Sato*.

1985

- (11933) PRITCHARD, G., 1985. Damselfly. In: J.H. Marsh, [Ed.], *The Canadian encyclopedia*, Vol. 1, p. 466, Hurtig, Edmonton. ISBN 0-88830-270-3. — (Div. Ecol., Dept Biol. Sci., Univ. Calgary, 2500 University Dr. N.W., Calgary, AB, T2N 1N4, CA).
A concise, encyclopedia-style article, by one of the leading Canadian odonatologists. 51 Zygoptera spp. are so far known from Canada.
- (11934) PRITCHARD, G., 1985. Dragonfly. In: J.H. Marsh, [Ed.], *The Canadian encyclopedia*, Vol. 1, p. 509, Hurtig, Edmonton. ISBN 0-88830-270-3. — (Div. Ecol., Dept Biol. Sci., Univ. Calgary, 2500 University Dr. N.W., Calgary, AB, T2N 1N4, CA).
A concise, encyclopedia-style article, by one of the leading Canadian odonatologists. 143 Anisoptera spp. are so far known from Canada.

1990

- (11935) KITCHING, R.L., 1990. Foodwebs from phytotelmata in Madang, Papua New Guinea. *Entomologist* 109(3): 153-164. — (Aust. Sch. Environ. Stud. & Coop. Res. Cent. Trop. Rainforest Ecol., Griffith Univ., Brisbane, AU).
"Lyriothemis sp." and "Podopteryx sp." are listed among the organisms encountered in the Madang phytotelmata (both in tree holes).
- (11936) WEI, J. et al., 1990 [Natural enemies of agricultural pest insects of Shaanxi province]. Tianze,

Yangling. 455 pp., 16 col. pls excl., ISBN 7-80559-023-0. (Chin.). — Price: US \$ 35.- net.
The odon. chapter appears on pp. 311-328. It includes a fam. key and the descriptions of 13 spp.

1993

(11937) DANKS, H.V., 1993. Patterns of diversity in the Canadian insect fauna. *Mem. ent. Soc. Can.* 165: 51-74. (With Fr. s.). — (Biol. Surv. Can., Terrestrial Arthropods, Can. Mus. Nature, P.O. Box 3443, Stn D, Ottawa, ON, K1P 6P4, CA).

As far as the odon. are concerned, the distribution of the Corduliidae and Libellulidae is analysed and discussed. These are strongly eastern, and some statistical data on their occurrence E and W from Manitoba (and in British Columbia and Ontario) are presented.

(11938) JIANG, S.-H., 1993. *A catalogue of the insect specimens preserved in the insect collection of the Huazhong Agricultural University, Wuhan, China.* Beijing Agric. Univ. Publ. House, Beijing. viii+162 pp., ISBN 7-81002-555-4/Q.36. (Chin., with Engl. title). — Price: US \$ 15.- net.
20 odon. spp. are listed, with brief annotations in Chin.

(11939) MUZON, J., 1993. *Sistemática y zoogeografía de la familia Lestidae (Odonata-Zygoptera) en la República Argentina.* Tesis Doctor en Ciencias Biológicas, Fac. Cien. Exactas, Univ. Buenos Aires. 168 pp. + 64 pp. figs & captions. (Span.). — (Inst. Limnol. "Dr R.A. Ringuelet", C.C. 712, AR-1900 La Plata).

[Not available for abstracting.] — Includes a comprehensive treatment and figs of *Archilestes exoletus* (Sel.), *Lestes auritus* Hag., *L. bipupillatus* Calv., *L. dichrostigma* Calv., *L. forficula* Ramb., *L. paulistus* Calv., *L. pictus* Sel., *L. spatula* Fraser, *L. tricolor* Erichs., and *L. undulatus* Say.

(11940) SUI, J.-Z. & H.-G. SUN, 1993. Odonata. In: C.-m. Huang, [Ed.], *Animals of Longqi Mountain*, pp. 4-34, China Forestry Publ. House, Beijing. ISBN 7-5038-1180-3. (Chin., with Engl. s.). — (Shanghai Inst. Ent., Acad. Sinica, Chunking Rd (S) 225, Shanghai-200025, PRC).

Descriptions and structural figs of 53 spp.; Longqi Mt., Fujian prov., China.

1994

(11941) McELLAGOTT, P.E.K. & D.J. LEWIS, 1994.

Relative efficiencies of wet and dry extraction techniques for sampling aquatic macroinvertebrates in a subarctic peatland. *Mem. ent. Soc. Can.* 169: 285-289. (With Fr. s.). — (Dept Nat. Resour. Sci., McGill Univ., Macdonald Campus, 21.111 Lakeshore Rd, Ste-Anne-de-Bellevue, QC, H9X 3V9, CA).

The 2 techniques are described, the libellulid and aeshnid larvae are considered, and it is shown statistically that the 2 methods do not differ significantly in their efficiency for extracting larval odon.

(11942) O'BRIEN, M., 1994. Renovation nearly completed at the UMMZ. *Insect Colln News* 9: 13-14. — (Insect Div., Mus. Zool., Univ. Mich., Ann Arbor, MI 48109-1079, USA).

A brief report on the University of Michigan Museum of Zoology insect collection. This contains over 3000 odon. spp., and includes the famous E.B. Williamson odon. collection and library, curated and kept updated during many years by the late Mrs L.K. Gloyd. The collection is open again for "business", and the present Curator is inviting here the workers to get in touch.

1995

(11943) BELLAMY, C.L., M. KRUGER & R.B. TOMS, 1995. The invertebrate collections of the Transvaal Museum. *Insect Colln News* 10: 20-21. — (Coleoptera Dept, Transvaal Mus., P.O. Box 413, Pretoria-0001, SA).

The odon. collection contains the important Balinsky collection, and consists of over 7000 specimens, incl. 60 types.

(11944) COMPTE-SART, A., 1995. Sobre la identidad del odonato fósil *Daemhippus cincuneguii* (Gil Collado, 1926). *Avan. Ent. iber.* 1995: 319-332. (With Engl. s.). — (Mus. Nac. Cien. Nat., José Gutiérrez Abascal 2, ES-28006 Madrid).

This little known sp., based on a single, poorly preserved specimen from the Miocene of Ribesalbes (Castellón, Spain), originally placed in the Platycnemididae, has been surely misinterpreted. It is probably referable to the Lestidae, and a new approach is proposed.

(11945) GARRISON, R.W., 1995. Identification charges. *Insect Colln News* 10: 12. — (Office address: Dept Agric. Commissioner & Weights and Measures, 3400 La Madera Ave, El Monte, CA 91732, USA).

While the cost recovery charge would amount to US \$ 22.- for every identification, as from April 1995, US \$

10.- are charged per specimen to be identified by the taxonomists of the above Department.

- (11946) STARR, C.K. & H. NELSON, 1995. Regulations and procedures for collecting land arthropods in Trinidad & Tobago. *Insect Colln News* 10: 16-17. — (Dept Zool., Univ. West Indies, St Augustine, Trinidad & Tobago).

Permits are required for entry into some restricted areas. No permit is required to collect land arthropods, but an export permit is needed to remove these from the country. — The entomologists are invited to get in touch with the Senior Author before they undertake a collecting trip to this country.

- (11947) WANG, R., Q. ZHENG & W. ZHOU, 1995. Odonata. *In*: T. Zhu, [Ed.], *Insects and macrofungi of Gutianshan, Zhejiang*, pp. 12-17, Zhejiang Sci. & Technol. Publ. House, ISBN 7-5341-0749-0. (Chin., with Engl. s.). — Price: US \$ 35.- net. — (Third Author: Dept Ent., Zhejiang Mus. Nat. Hist., Gu-shan, Hang Zhou - 310012, P.R. China).

Annotated list of 79 spp.; Mt Gutian, Zhejiang prov., P.R. China.

- (11948) ZHOU, W., L. ZHAO & Y. XU, 1995. Odonata. *In*: H. Wu, [Ed.], *Insects of Baishanzu Mountain, eastern China*, pp. 44-51, China Forestry Publ. House, Beijing, ISBN 7-5038-1744-5. (Chin., with Engl. s.). — Price US \$ 90.- net. — (First Author: Dept Ent., Zhejiang Mus. Nat. Hist., Gu-shan, Hang Zhou-310012, P.R. China).

Annotated list of 74 spp.; Baishanzu Mt, Zhejiang prov., P.R. China.

1996

- (11949) ADAMOVIĆ, Ž.R. & S.T. VIJATOV, 1996. The summer Odonata species in the lower Tisa valley, Banat. *Acta ent. serb.* 1(1/2): 63-80. (With Serb. s.). — (First Author deceased; — Second Author: Inst. Med. Res., P.O. Box 721, YU-11001 Beograd, Serbia).

17 spp. are listed, and their habitats and distribution are briefly noticed. This is the first record of *Calopteryx s. splendens* in Serbia, and the nominate ssp. is morphometrically examined.

- (11950) COMPTE-SART, A., 1996. Los odonatos fósiles de España (insectos). *Tomo extraord. 125 Anivers. real Soc. esp. Hist. nat.*, pp. 295-297. — (Mus. Nac. Cien. Nat., José Gutiérrez Abascal 2, ES-28006

Madrid).

A brief review of fossil taxa known from Spain, with species names and bibliographic references.

- (11951) GEENE, P., 1996. *Libellen in de Manteling van Walcheren*. — [*Dragonflies of the Manteling, Walcheren Island, The Netherlands*]. Geene, Oostkapelle. 40 pp. (Dutch). — (Halve Maanstraat 57, NL-4356 BN Oostkapelle).

An exhaustive report and discussion on 15 spp., recorded in 1996. *Aeshna affinis* and *Crocothemis erythraea* are of particular interest.

- (11952) PRITCHARD, G., 1996. The life history of a tropical dragonfly: *Cora marina* (Odonata: Polythoridae) in Guanacaste, Costa Rica. *J. trop. Ecol.* 12: 573-581. (With Span. s.). — (Div. Ecol., Dept Biol. Sci., Univ. Calgary, 2500 University Dr. N.W., Calgary, AB, T2N 1N4, CA).

The life history was followed for 1 yr in 2 permanent streams in Guanacaste Natn. Park (alt. 600 m). The water temperature was ca 21°C year-round, but there was a distinct wet-dry seasonality, very little rain falling from January to May. In both streams, *C. marina* was univoltine. Adults first appeared at the beginning of May and the flight period coincided with the wet season. The availability of water-soaked logs as oviposition sites probably restricts reproduction to the wet season. Eggs hatched from mid-July to December. Recruitment to subsequent larval instars was slow during the wet season but increased at the start of the dry season. Final-instar larvae were collected from March to October. Oviposition in logs above the stream and the ability to live in the low oxygen conditions of the hyporheic zone probably allow eggs and small larvae to survive wet season spates.

- (11953) VERSCHOOR, L., [Ed.], 1996. *Indische gedichten*. Indische Kulturele Kring, 's Gravenhage. viii+92 pp. ISBN none. (Dutch).

Includes a dragonfly tanka by H.C.L. Van Maarseveen.

1997

- (11954) *ACTA HYDROENTOMOLOGICA LATVICA*, Vol. 4 (June 1997). Published by Zināne, Riga. ISBN 5-7966-1186-0. (Latvian, with Engl. s's). — (Orders to: Scientia, P.O. Box 137, NL-7200 AC Zutphen).

[Odonatol. papers:] *Bērziņš, B.*: The lake Sārums in 1936 (Latvia) (pp. 14-20); — *Spuris, Z.*: Some observations on the water insect fauna in Latvia 1996 (Insecta: Odonata, Trichoptera, Heteroptera) (pp. 21-28).

- (11955) AONO, T., 1997. [The Okayama dragonfly specimens in the Kurashiki Museum of Natural History, donated by the late Dr H. Shigei]. *Suzumushi* 131: 40-44. (Jap., with taxonomic nomencl.). – (937-8, Ouchi, Kurashiki, Okayama pref., 710-0817, JA). Annotated list of 75 spp., covering almost the complete fauna of Okayama, Japan.
- (11956) ASAHINA, S., 1997. [The insect of the month. *Aeschna nigroflava*]. *Insectarium, Tokyo* 34(9): 291, cover phot. excl. (Jap., with taxonomic nomenclature). – (Takadanobaba 4-4-24, Shinjuku-ku, Tokyo 169, JA). Feature article. For Engl. edn cf. *OA* 11695.
- (11957) BACH, C. & A. COMPTE, 1997. La entomología moderna en España. Su desarrollo: de los orígenes a 1960. *Bol. Soc. ent. aragon.* 20: 367-392. – (Second Author: Depto Biodiv., Mus. Nac. Cien. Nat., José Gutiérrez Abascal 2, ES-28006 Madrid). A comprehensive review, with a reference to the odonotol. work of L. Navás (1858-1938; with a portrait).
- (11958) BECHLY, G., 1997. New fossil odonates from the Upper Triassic of Italy, with a redescription of *Italophlebia gervasuttii* Whalley, and a reclassification of Triassic dragonflies (Insecta: Odonata). *Bergamo* 19: 31-70. (With Ital. s.). – (Breslauer Str. 30, D-17104 Böblingen). The odon. fauna of the Upper Triassic of Bergamo is revised. *Italomyrmeleon bergomensis* gen. & sp. n. is described as first Protomyrmeleontidae from the Triassic of Europe. *Italophlebia gervasuttii* is redescribed and *I. paganoniae* sp. n. is described. The phylogenetic position of *Italophlebia* is discussed and the genus is shown to be one of the oldest known stem-group representatives of Anisoptera, and is therefore transferred from Zygoptera, Hemiphlebioidea, to "Anisozygoptera", Isophlebioptera. Within Isophlebioptera, a new clade, Parazygoptera, is proposed and a phylogenetic system of its subgroups is introduced. *Italophlebiidae* is regarded as a junior subjective synonym of *Triassothemistini* stat. nov., and *Progonophlebiidae* is regarded as a junior subjective synonym of *Mesophlebiinae*. *Triassoneuridae* is regarded as a junior subjective synonym of *Triassolestidae*, and *Oreopteridae* is regarded as a junior subjective synonym of *Asiopteridae*. *Pseudotriassothemis* gen. n. (type genus of *Pseudotriassothemistinae* subfam. n.) is erected for the Japanese "Triassoneura" okafujii, "Triassothemis" nipponensis and "T." minensis. *Afrotriassothemis* subgen. n. is proposed in *Triassothemis* for the South African *T. heidiac* and *T. regularis*, that were previously classified in *Triassoneura*. "Triassoneura" primitiva is transferred from *Triassoneuridae* to *Archizygoptera-Batkeniidae* in *Paratriassoneura* gen. n. "Sogdopteron" legibile is transferred from *Asiopteridae* to *Triassolestini*. *Sogjutella mollis* is transferred from *Asiopteridae* to *Cyclothemistidae*. *Sphenophlebia*, *Mesoeiophlebia* and *Ensphingophlebia* are transferred from *Euthemistidae*, and *Epiophlebiidae* to *Sphenophlebiidae* fam. n., which is regarded as the most basal group of *Parazygoptera*. *Proeuthemis pritykinae* is preliminarily transferred from *Euthemistidae* to the *Sphenophlebiidae* too, although it might also be the sister-group of *Asiopteridae*. "Sphenophlebia" pommerana is transferred to the genus *Turanopteron* in *Asiopteridae*. *Triadotypus guillaumei* is recognised as a junior subjective synonym of *Reisia gelasii*, and *R. nana* sp. n. is described from the Triassic of France. Consequently, *Triadotypus sogdianus* is changed to *Reisia sogdianus* comb. nov. *Reisia* (= *Triadotypus*) and *Triassologus* are both transferred from "Protodonata" to *Triadophlebioptera*, so that there are no Triassic protodonates known any longer. *Thuringopteryx gimmi* is transferred from "Protodonata" to *Palaeodictyoptera*, as the first known Triassic representative of this group.
- (11959) CANNINGS, S.G. & R.A. CANNINGS, 1997. Dragonflies (Odonata) of the Yukon. In: H.V. Danks & J.A. Downes. [Eds], *Insects of the Yukon*, pp. 169-200, Ent. Soc. Canada, Ottawa [*Biol. Surv. Can. Monogr.* 2]. (With Fr. s.). – (First Author: Conserv. Data Cent., Resource Invent. Br., Ministry Environ., 780 Blanshard St, Victoria, BC, V8V 1X4, CA; – Second Author: Royal British Columbia Mus., P.O. Box 9815, Stn Prov. Govt, Victoria, BC, V8W 9W2, CA; – The book [1034 pp.] can be ordered, at US \$ 89.- net, from Ent. Soc. Can., 393 Winston Ave., Ottawa, ON, K2A 1Y8, CA). The paper is based on the results of the same field work as reported in *OA* 8289, but it is providing a broader and more detailed analysis of various features of the odon. fauna of the Yukon, Canada, from where 33 spp. are so far known. – Distinctive odon. communities occur in small lakes and ponds, sedge marshes, fen ponds with aquatic moss, shallow sedge-moss fens and bogs and small, slowly moving streams; there are few dragonflies in the large lakes and none yet collected from the large rivers of the Territory. Permafrost is a dominant feature of habitats in the

- northern Yukon. Summers are warmest in the low, central valleys, but the northern valleys can also have warm, albeit short summers. The arctic slope has cool, very short summers; apparently, dragonflies do not regularly breed there. The northern limit of the Odon. in N America is essentially the arctic treeline, with only a few individuals of 1 or 2 spp. breeding, perhaps only periodically, slightly to the North. — Biogeography, distribution, habitat, flight period, and other ecological data are discussed for the 33 spp. Faunal elements are outlined: 23 spp. are boreal; 3 are from the transition zone; 2 are Cordilleran; 1 is Eberingian in N America; 1 is widespread in the West; 3 are widespread throughout N America. Boreal spp. can be further divided into 4 subelements: 13 spp. are widespread boreal, 4 are N boreal, 4 are S boreal, and 2 are W boreal; 6 spp. have holarctic distributions. In addition to the Yukon locality maps, for each sp. a general distribution map (nearctic or holarctic, as applicable) is also provided.
- (11960) DE GROOT, T., 1997. *De libellen van Naardemeer, Botshol en Nieuwkoopse Plassen*. — [*Dragonflies of Naarden Lake, Botshol and Nieuwkoopse Plassen*]. Ver. Natuurmonumenten, 's-Graveland. Vol. 1 (text): vi+51 pp., Vol. 2 (maps): 44 pp. [O & B Rapp. No. 97-30]. (Dutch). — (Bolivarstraat 89, NL-3573 ZX Utrecht).
A very detailed analysis of the odon. assemblages (25 spp.) at the said localities, Noord Holland prov., the Netherlands, with management suggestions. This is one of the most careful recent professional regional treatments of this kind in the Netherlands.
- (11961) DE GROOT, T., 1997. *Libellen van het Zwanenwater en Duin & Kruidberg*. — [*Dragonflies of the Zwanenwater and Duin & Kruidberg*]. Ver. Natuurmonumenten, 's-Graveland. vi+19 pp. [O & B Rapp. No. 97-48]. (Dutch). — (Bolivarstraat 89, NL-3573 ZX Utrecht).
In 1997, the odon. communities (18 spp.) were studied at the 2 dune localities, Noord Holland prov., the Netherlands. A detailed analysis is presented, and tentative management measures are proposed.
- (11962) GEISSEN, H.-P., 1997. Die Asiatische Keiljungfer *Gomphus flavipes* Charpentier: Larvenfund im Mittelrhein bei Koblenz (Insecta: Odonata). *Fauna Flora Rheinland-Pfalz* (Beih.) 22: 171-176. (With Engl. s.). — (Brunnenstr. 14, D-56075 Koblenz-Stolzenfels).
1 larva (sex not stated). Rhine R., Koblenz area, Ger-
many. With detailed description of the specimen and its habitat.
- (11963) HILFERT, D. & G. RÜPPELL, 1997. Alternative mating tactics in *Calopteryx splendens* (Odonata: Calopterygidae). *Mitt. dt. Ges. allg. angew. Ent.* 11 (1/6): 411-414. (With Germ. s.). — (Zool. Inst., Techn. Univ., Fasanenstr. 3, D-38092 Braunschweig).
Based on the same work as reported in OA 11741. See also OA 11713.
- (11964) KARUBE, H., 1997. A new species of the genus *Oligoaeschna* (Odonata, Aeshnidae) from Sumatra. *Bull. Kanagawa prefect. Mus.* (Nat. Sci.) 26: 47-49. (With Jap. s.). — (Kanagawa Prefect. Mus. Nat. Hist., 499 Iryuda, Odawara, Kanagawa, 250, JA).
O. pseudosumatrana sp. n. is described and illustrated from a single ♂ (Pini Is., off W coast of Sumatra, X-1990; deposited in Author's institution). It closely resembles *O. sumatrana* Lieft., from which it is distinguished by the shape of the appendages.
- (11965) KARUBE, H., 1997. [Asiagomphus *pryeri* and *Trigomphus melampus* surviving in the Ashigara Lowlands]. *Kanagawa-Chûhō* 120: 55-57. (Jap.). — (Kanagawa Prefect. Mus. Nat. Hist., 499 Iryuda, Odawara, Kanagawa, 250, JA).
The 2 spp. are considered endangered in the Kanagawa pref., Japan. In 1997, their habitat was discovered in the Odawara area, and it is here described.
- (11966) KARUBE, H. & M. NAKANO, 1997. [*Rhyothemis fuliginosa* in large numbers in the Kawasaki city and in Samukawa-machi]. *Kanagawa-Chûhō* 119: 29-31. (Jap.). — (First Author: Kanagawa Prefect. Mus. Nat. Hist., 499 Iryuda, Odawara, Kanagawa, 250, JA).
Recently, this Kanagawa redlisted sp. was discovered in numbers at 2 localities. It seems, its occurrence is conditioned by the presence of abundant aquatic vegetation.
- (11967) KASUYA, E., K. EDANAMI & I. OHNO, 1997. Selection and reproductive success in males of the dragonfly *Orthetrum japonicum* (Odonata: Libellulidae). *Res. Popul. Ecol.* 39(2): 113-119. — (First Author: Dept Biol., Fac. Sci., Kyushu Univ., 812-81 Fukuoka, JA).
Reproduction success, copulation success and mating success were measured in a Niigata pref. population. Copulation success explained the greatest variation in reproductive success. The proportion of copulations

- followed by oviposition was positively correlated with the number of oviposited eggs per mating. Directional selection on four morphological characters was estimated. The effect of selection on correlated traits was comparable to that of direct selection. Directional selection varied between traits and between episodes in a single trait. The probability that the observed directional selection on the four morphological traits was expected under the condition of the selective neutrality of traits was not smaller than 5%.
- (1968) KOTARAC, M., 1997. *Poročilo o vzorčenju favne kačjih pastirjev na območju Pikolud pri Novi Gorici*. – [Report on the dragonfly survey in the Pikolud area near Nova Gorica]. Center za kartografijo favne in flore, Miklavž. ii+4 pp. (Slovene). – (Antoličičeva 1, SI-2204 Miklavž-na-Dravskem-polju).
17 spp. are listed (1995-1997), and graphs are presented of the odon. communities at 2 localities. The area harbours 1 of the 2 hitherto known *Somatochlora flavomaculata* populations in the Goriško region, W Slovenia.
- (1969) KOTARAC, M., 1997. *Presoja vplivov na okolje za AC Cogetinci-Radmožanci: kačji pastirji (Odonata)*. – [Assessment of the environmental impact relative to the superhighway construction, Cogetinci-Radmožanci: dragonflies (Odonata)]. Nat. Hist. Mus. Slovenia, Ljubljana. ii+10 pp. (Slovene). – (Antoličičeva 1, SI-2204 Miklavž-na-Dravskem-polju).
At 21 localities, 46 spp. were evidenced (1994-1997). Locality-wise the spp. are listed, the environmental impact of the superhighway construction is assessed, and some management suggestions are offered. Styria, E Slovenia.
- (1970) KOTARAC, M., I. LESKOVAR & K. POBOLJŠAJ, 1997. *Naravovarstvene smernice za obnovo kala v Divčih*. – [Conservancy guide lines for the pond restoration in Divči]. Nat. Hist. Mus. Slovenia, Ljubljana. ii+4 pp. (Slovene). – (First Author: Antoličičeva 1, SI-2204 Miklavž-na-Dravskem-polju).
Aeshna affinis, *A. cyanea* (breeding) and *Sympetrum striolatum* are reported from this man-made karst-pond, the biotic community of which is at present in the final stage of succession. Slovenia.
- (1971) KRECHEL, R. & S.A. SCHOLZ-LAMBOTTE, 1997. Beitrag zur Libellenfauna des Kreises Mettmann. *Jber. naturw. Ver. Wuppertal* 50: 133-148. (With Engl. s.). – (IVÖR, Volmerswerther Str. 80, D-40221 Düsseldorf).
44 spp. are listed, based on literature records and on the 1993-1994 field evidence; – Mettmann distr., Northrhine-Westphalia, Germany.
- (1972) KURASHIKI ENTOMOLOGICAL SOCIETY [indicated as Author], 1997. [Results of the Mnais survey in Okayama prefecture]. *Suzumushi* 131: 10-39, 3 col. pls incl. (Jap., with taxonomic nomencl.). – (c/o Kurashiki Insect Mus., Saiwai-cho, Kurashiki, Okayama pref., 710-0051, JA).
The 3 major river systems of Okayama (Yoshii, Asahi and Takahashi Rs) support 5 M. p. pruinosa and 5 M. p. nawai forms. The survey was initiated by Dr H. Shigei (deceased 1996; the present issue is dedicated to his memory) and coached by K. Inoue. Mainly during 1989-1991, samples were taken at 387 localities and close to 2000 specimens were collected and thoroughly analysed. A good number of generally very rare aberrant forms is also reported. – A more comprehensive Engl. s. is available from the Eds of *Odonatologica*.
- (1973) MATTHEWS, J.V. & A. TELKA, 1997. Insect fossils from the Yukon. In: H.V. Danks & J.A. Downes, [Eds], *Insects of the Yukon*, pp. 911-962, Ent. Soc. Canada, Ottawa [*Biol. Surv. Canada Monogr.* 2]. (With Fr. s.). – For order address see OA 11959. – (Second Author: Terrain Sci. Div., Geol. Surv. Canada, Ottawa, ON, K1A 0E8, CA).
The only odon. fossils so far identified are the distinctive mandibles and, from Rock R. (Late Wisconsin, full glacial), a fragment of the genital apparatus. The odon. in Yukon samples are rare, mainly because many hitherto studied samples represent treeline and tundra environments, i.e. not the habitat types where the odon. are abundant.
- (1974) MIYACHI, K. & K. SUZUKI, 1997. Can territorial males of Japanese Mnais damselflies recognize females by visual cues? *Insectarium, Tokyo* 34(6): 200-206. (Jap., with Engl. title & fig. captions). – (Second Author: Dept Biol., Fac. Sci., Toyama Univ., 3190 Gofuku, Toyama, 930, JA).
[Abstract not available.]
- (1975) MORIYASU, A., 1997. [Distribution of *Aeshna juncea* in Okayama prefecture, with notes on some new localities]. *Suzumushi* 131: 46-47. (Jap.). – (2430, Urata, Kurashiki, Okayama pref., 710-0843,

- JA).
The previously known and the new localities are mapped. Save for a single locality in central Okayama, the sp. is restricted to the northern areas, coinciding with the occurrence of marshes in the mountainous regions of the prefecture.
- (11976) MORIYASU, A., 1997. [Distribution of *Aeshna nigroflava* in Okayama prefecture, with notes on some new localities]. *Suzumushi* 131: 48-49. (Jap.). – (2430, Urata, Kurashiki, Okayama pref., 710-0843, JA).
The previously known and the new localities are mapped. In Okayama the sp. has a scattered distribution, conditioned by pond availability in the hilly areas.
- (11977) MORIYASU, A., 1997. [Distribution of *Sympetrum gracile* in Okayama prefecture, with notes on some new localities]. *Suzumushi* 131: 45-46. (Jap.). – (2430, Urata, Kurashiki, Okayama pref., 710-0843, JA).
The previously known and the new localities are mapped. The sp. is confined to the eastern, southern and western regions of the prefecture, coinciding with the occurrence of ponds in the hilly areas.
- (11978) [O'BRIEN, M., Compiler], 1997. *Michigan Odonata Survey collector's handbook*. (Version 1.0). Mich. Odon. Survey, Ann Arbor. ii+78 pp., ISBN none. – (Available at US \$ 6.- net from Mich. Odon. Survey, c/o Insect Div., Mus. Zool., Univ. Mich., Ann Arbor, MI 48109-1079, USA).
The book was produced to facilitate the work of the Michigan odon. collectors/collaborators of the Michigan Odonata Survey scheme. It is not copyrighted, but it should not be made generally available, since the species distribution maps only represent the preliminary picture of the work in progress. – The following are the main titles, most of those signed are authored by *M. O'Brien*: "About the Michigan Odonata Survey" [etc.] (pp. 1-6); – "Specific collecting instructions" (pp. 7-13); "Key to the Michigan Odonata families (pp. 13-16; by *M.A. Kielb*); – "A key to the larval Odonata of Michigan, family level" (pp. 17-19; by *E. Bright*); – "Checklist of Michigan Odonata" (pp. 20-21); – "Odonata literature for the Great Lakes region" (pp. 21-24); – "Some dragonfly terms" (pp. 25-26; by *D.R. Paulson*); – Appendices: (1) Suppliers (pp. 27-28), – (2) More on collecting techniques (pp. 29-30; from *T. Morse's* summary on the IORI web site), – (3) Databasing collections (pp. 31-32; by *M. O'Brien*), – (4) MOS distribution maps (pp. 33-75); – Michigan Odonata Survey specimen data sheet (pp. 77-78).
- (11979) *ODONATOLOGICAL LIBRARY NEWS*, No. 21 (7 Dec. 1997). Published by the Kansai Research Group of Odonatology. (Jap., with Engl. title). – (c/o K. Inoue, 5-9, Fuminosato 4-chome, Abeno-ku, Osaka, 545-0004, JA).
417 recent Japanese titles are listed.
- (11980) OKUJIMA, Y., 1997. [A new locality of *Anaciaeschna martini*]. *Suzumushi* 131: 76-77. (Jap.). – (Kurashiki Mus. Nat. Hist., 2-6-1, Chuo, Kurashiki, Okayama pref., 710-0046, JA).
1 ♂, Mt Yuka, Kurashiki, 11-VIII-1996.
- (11981) ONO, H., 1997. [The first record of *Orthetrum j. japonicum* with black abdominal stripes]. *Suzumushi* 131: 49. (Jap.). – (2580-50, Sakazu, Kurashiki, Okayama pref., 710-0801, JA).
2 mature ♂, with pruinose abdomen and the edges of all segments black, are brought on record (N outskirts of Okayama City, 19/21-V-1996; identified by K. Inoue).
- (11982) ORR, A.G., 1997. Odonate predation in Bornean treehole communities: some observations on predator density and prey diversity. *In*: H. Ulrich, [Ed.], Tropical biodiversity and systematics, pp. 223-227, Mus. A. König, Bonn. – (26 Currimundi Rd, Caloundra, Qld 4451, AU).
Phytotelmata in Bornean mixed dipterocarp forest fall into several categories, the most common of which is the buttress or trunk pan. Such holes are often quite large (up to 10 litres) and are mostly filled nearly to the brim with a thick layer of leaf litter, under which is a large body of anoxic sludge. Despite apparently high rates of decomposition only a few (6-10) spp. make up the metazoan community, including up to 3 spp. of predatory odon. larvae, viz. *Pericnemis triangularis*, *Lyriothemis cleis* and *Indaeschna grubaueri*. Odon. generally account for a relatively high proportion of the metazoan biomass, in some cases far exceeding the biomass of detritivores. This suggests that decomposition rates must be very high, and it is possible that high predation levels are responsible for suppressing diversity in the detritivore community.
- (11983) ORR, A.G. & P.S. CRANSTON, 1997. Hitchhiker or parasite? A ceratopogonid midge and its

- odonate host. *J. nat. Hist.* 31: 1849-1858. — (Second Author: Div. Ent., CSIRO, P.O. Box 1700, Canberra, ACT 2601, AU).
- Forcipomyia* (*Pterobosca*) *debenhamae* sp. n. (Dipt., Ceratopogonidae) is described from Brunei. The behaviour of adult ♀ midges, which have been found only upon the thorax of hosts, predominantly of *Libellago hyalina*, appears to deleteriously impact on the quality and duration of territory holding of the host. The lack of any confirmation of host feeding leads to speculations on the nature of the association.
- (11984) RÉGIL, J.A., I. CUETO & R. PACHO, 1997. Trabajos y notas publicados en el Boletín de la Asociación española de Entomología, volúmenes 1 al 20 (1977-1996). *Boln As. esp. Ent.* 21(1/2 Suppl.): 1-87. — (First Author: Depto Biol. Anima., Fac. Biol., Univ. León, ES-24071 León).
Lists 10 odonotol. titles (pp. 57-58).
- (11985) ROBIČ, R., 1997. [Dragonfly haiku]. *Letni Časi* 1(1): 24. (Slovene). — (c/o Editor: Dr P. Repar, Cvibljje 15, SI-8350 Dolenjske toplice).
"Ka ji pastirji./ Pod jezom utopljenec./ Na bregu ribe."
- (11986) RÖDEL, M.-O. & K.E. LENSENMAIR, 1997. Predator-induced swarms in the tadpoles of an African savanna frog, *Phrynomantis microps*. *Ethology* 103(11): 902-914. — (Lehrst. Tierökol., Theodor-Boveri-Inst. Biowiss., Am Hubland, D-97074 Würzburg).
In Comoé National Park, Ivory Coast, tadpole aggregations occur in the presence of predators, which include *Anax imperator*, *Pantala flavescens* and *Tramea basilaris*. Swarm behaviour is induced by optical and chemical cues, and frog response is different to different predators.
- (11987) ŠALAMUN, A., 1997. Poročilo odonato-loške skupine. — [Report of the Odonata team]. *Bilt. Kluba mlad. Razisk., Koper* 1997 (Sept.): 14-16. (Slovene). — (Čevljarska 28, SI-6000 Koper, Slovenia).
A checklist of 10 spp., evidenced during a workshop at Gračiče, SW Slovenia.
- (11988) ŠALAMUN, A., 1997. *Preliminarne meritve in opazovanja populacije sredozemskega lesketnika (Somatochlora meridionalis Nielsen, 1935) (Odonata: Corduliidae)*. — [Preliminary biometry and field observations on a population of *Somatochlora meridionalis Nielsen, 1935 (Odonata: Corduliidae)*]. Individualna naloga, Anim. Ecol., Dept Biol., Biotech. Fac., Univ. Ljubljana. ii+12 pp. (Slovene). — (Čevljarska 28, SI-6000 Koper, Slovenia).
The studies were conducted at 2 streams nr Brežice, Slovenia. The sp. is non-territorial and has a cohort development. The individual dispersion is considerable, therefore the capture-mark-recapture method cannot be used. Biometric data are based on 274 larvae. A correlation exists between the length of the left hind tibia and the head width.
- (11989) SAWADA, H., 1997. [The first record of *Platycnemis foliacea sasakii* from the Asahi R. system]. *Suzumushi* 131: 76. (Jap.). — (2-1-8-1001, Kosei-cho, Okayama, 700-0985, JA).
1 ♂, Takebe-cho, Mitsu-gun, Okayama pref.; 3-VII-1992.
- (11990) SCHMIDT, B., 1997. Vergleichende Untersuchungen zum Mikroklima von Schlenkengewässern und Pflanzenbeständen in Mooren des Alpenvorlandes mit Hinweisen zu Libellen (Odonata). *Telma* 27: 35-59. (With Engl. s.). — (Büro Tierökol., Kohlenbacher Talstr. 18, D-79183 Waldkirch).
The results are presented of comparative investigations on microclimate of shallow bog pools and plant communities in bogs of the "Alpenvorland", Germany, with brief annotations on the odon. (*Ceriatagrion tenellum*, *Nehalennia speciosa*, *Sympetma paedisca*, *Aeshna caerulea*, *Sympetrum depressiusculum*).
- (11991) SKEVINGTON, J. & I. CARMICHAEL, 1997. Dragonflies and damselflies (Odonata) of Bosanquet (North Lambton County, Ontario). *Proc. ent. Soc. Ont.* 128: 3-12. — (First Author: Dept Ent., Univ. Queensland, Brisbane, Qld 4072, AU; — Second Author: Box 24, Fingal, ON, N0L 1K0, CA).
62 spp. are listed. *Enallagma triviatum* is new to Canada and the record of *E. basidens* signifies that this sp. is continuing to expand its range northward.
- (11992) STERNBERG, K., 1997. Warum eignen sich Sekundärbiotope nur bedingt als Refugium für Libellen (Odonata)? *Veröff. NatSchutz LandschaftsPfl. Bad.-Württ.* 71/72(1): 233-243. (With Engl. s.). — (Schüllerstr. 15, D-76297 Stutensee).
Man-made ponds are suboptimal or inappropriate for rare and endangered spp. Some of the reasons are: the lack of shallow water zones, uncomfortable microclimatic conditions, negative influence of cultivating of the surrounding areas, artificial acceleration of the natural succession, isolation, limited habitat

- diversity, too frequent habitat management entailing permanent ecosystem disturbance, etc. Some conditions required for species conservation are outlined.
- (11993) SUN, H., 1997. Odonata: Aeshnidae, Gomphidae, Libellulidae, Agriidae, Epallagidae, Coenagriidae, Platycnemididae, Megapodagriidae, Lestidae and Synlestidae. *In*: X. Yang, [Ed.], *Insects of the Three Gorges Reservoir area of the Yangtze River*, vol. 1, pp. 71-92, Chongqing Publ. House, Chongqing, ISBN 7-5366-3578-8. (Chin., with Engl. s.). — Price (Vols 1 & 2): US \$ 220.- net. — (Inst. Zool., Acad. Sinica, Haitien, Beijing-200025, P.R. China).
 Descriptions and figs of structural features of 46 spp., evidenced during 1993-1994.
- (11994) TSUBAKI, Y., R.E. HOOPER & M.T. SIVA-JOTHY, 1997. Differences in adult and reproductive lifespan in two male forms of *Mnais pruinosa costalis* Selys (Odonata: Calopterygidae). *Res. Popul. Ecol.* 39(2): 149-155, 2 cover phot. excl. — (First Author: Lab. Wildlife Cons., Natn. Inst. Envir. Stud., Tsukuba, 305, JA).
M. p. costalis is unusual in that ♂♂ are dimorphic, appearing as clear-winged, non-territorial "sneaks" and orange-winged, territorial "fighters". Here are reported the results of population census data and behavioural observations in the field and laboratory, and present estimates of emergence period, reproductive period, total lifespan, and reproductive success of each morph. Clear-winged ♂♂ are smaller and have lower daily reproductive success than orange-winged ♂♂, but live for longer in the field and laboratory. It was accounted for the difference in the 'operational reproductive life' of the 2 morphs and estimated lifetime reproductive success: there was no difference between clear-winged and orange-winged ♂♂. The possible mechanisms for the maintenance of the 2 forms are discussed.
- (11995) TSUTSUI, M., 1997. *Calopteryx atrata*. *Insectarium, Tokyo* 34(8): cover p. 2. (Jap., with taxonomic nomenclature). — (Author's address not stated).
 Col. phot., with a comprehensive caption.
- (11996) TUBUKI, T., 1997. Observations of *Sympetrum* species in Hino city. *Insectarium, Tokyo* 34(10): 314-318. (Jap., with Engl. title & fig. captions). — (Author's address not stated).
 [Abstract not available.]
- (11997) WUDKEVICH, K., B.D. WISENDEN, D.P. CHIVERS & R.J.F. SMITH, 1997. Reactions of *Gammarus lacustris* to chemical stimuli from natural predators and injured conspecifics. *J. chem. Ecol.* 23(4): 1163-1171. — (Last Author: Dept Biol., Univ. Saskatchewan, 112 Science Place, Saskatoon, SK, S7N 5E2, CA).
 The study is based on the same technology as that reported in OA 11493. The amphipods, exposed to chemical stimuli from larval *Aeshna eremita*, reduced significantly their activity level, as compared with that recorded in the distilled water controls.
- 1998**
- (11998) ÅBRO, A., 1998. Structure and development of sperm bundles in the dragonfly *Aeshna juncea* L. (Odonata). *J. Morphol.* 235: 239-247. — (Inst. Anat., Univ. Bergen, Årstadveien 19, N-5009 Bergen).
 The study was carried out using light and electron microscopy. During their elongation, intracyst spermatids of the *A. juncea* testis form a slender cytoplasmic protrusion, the acrosomal conicoid, beyond the nucleus and acrosome rodlet. Gathering and parallel alignment of the transforming spermatids into a tight bundle take place inside the cyst. The original, rigid spermatid foreparts eventually associate, initially by becoming adhesive and swelling progressively to intertwine, and thus come to constitute a cap that binds together all sperm heads within a cyst in a spermatodesma. The development of the spermatodesma seems to occur disjoint from somatic cyst cells. Bundled in this form, the sperms are transferred to the intratestis canal and moved down the spermiduct to the seminal vesicle. They are then forwarded to the ♂ copulatory apparatus, from which they are transmitted to the ♀. Individual, fully formed sperms are seen to be liberated from the bundle when in the female receptaculum seminis. The remnant of the cytoplasmic acrosomal conicoid, which is considered an envelope of the acrosome rodlet, is then dissolved. The spermatodesmata are large sperm aggregates that constitute efficient vehicles for transmission of amounts of filamentous sperm to the ♀.
- (11999) ALLIOT, C., 1998. L'IUCN révisé ses catégories pour les listes rouges. *Insectes, Opie* 108(1): 26-27. — (Author's address not stated).
 A brief outline of the new classification, and a family-wise, annotated checklist of the situation in 11 orders, incl. the Odon. — For details and the complete species list see OA 11254.

(12000) ANDRÉS, J.A. & A. CORDERO, 1998. Effects of water mites on the damselfly *Ceriatrigon tenellum*. *Ecol. Ent.* 23(2): 103-109. — (Dipto Biol. Ecol. Animal, E.U.E.T. Forestal, Univ. Vigo, Campus Universitario, ES-36005 Pontevedra).

The effect of water mite parasitism is tested in a marked *C. tenellum* population during 1995 (individuals marked as mature adults) and 1996 (individuals marked as tenerals). Almost all teneral individuals were parasitized (98%) and mites were aggregated strongly on some individuals. Parasite load increased during the season. Parasites had no effect on the probability of recapture of hosts as mature adults. The average daily survival rate of lightly- and heavily-parasitized individuals, estimated with Jolly's stochastic method, did not differ significantly. In 1995 parasites had a significant effect on host mating success. The probability of mating was about 25% lower for heavily-parasitized males than for lightly-parasitized males. Lightly-parasitized males also mated more times than heavily-parasitized males, even if heavily-parasitized males lived longer. In 1996, parasitism did not have an effect on male mating success. In both years mites had no effect on female lifetime mating success. These results indicate that water mite parasitism does not reduce damselfly survivorship, but it could reduce male mating success in some circumstances. Further long-term studies are needed, especially in populations with a lower incidence of parasitism.

(12001) AOKI, T., 1998. *Odonata of Kobe*. Sport Education Agency, Kobe. 156 pp. (Jap., with Engl. title, chapter titles & fig. captions; and taxonomic nomenclature). ISBN none, [Nature of Kobe New Series, No. 1], Publisher's address not stated. — Price: ¥ 1300.- net. — (Author: 19-13, Fujimigaoka 2-chome, Nishi-ku, Kobe, 651-22, JA).

A very attractive and technically perfect field guide. The adult and larval keys are supported by excellent col. figs of all spp., both sexes, adults & larvae. — The main chapters are: "Odonates and their habitats in Kobe" (pp. 5-13); — "Odonates found in Kobe" (pp. 14-100); — "A biology of Odonata" (pp. 101-122); — and "Identification of odonate species" (pp. 123-152). — The book will be a very valuable asset in every odonatol. library!

(12002) ARGIA. The news journal of the Dragonfly Society of the Americas, Vol. 10, No. 1 (25 Apr. 1998). — (c/o Dr & Mrs T.W. Donnelly, 2091 Partridge Lane, Binghamton, NY 13903, USA).

[Signed articles:] Paulson, D.: *Orthemis discolor* (Or-

ange-bellied Skimmer), a new species for the U.S. (p. 7); — Dunkle, S.: Another *Orthemis discolor* record from Texas (pp. 7-8); — Paulson, D.: An early record of *Neoneura amelia* (*Amelia's* Threadtail) from Texas (p. 8); — New common names for U.S. Odonata (p. 8); — Thomas, M.: *Somatochlora williamsoni* in Connecticut (pp. 8-9); — Mueller, J.M.: *Nehallemia irene* in Alaska (p. 9); — Hutchings, G.: New record of *Tramea lacerata* (Hagen), the Black-mantled Glider, in western Canada (pp. 9-10); — Lederer, P.: New dragonfly records for New York (p. 10); — May, M.: Another migration report (pp. 10-12); — McIntyre, P.: Resting dragonfly eating ants! (pp. 12-13); — Orr, R.: A bit of 1997 migratory *Anax junius* data from Maryland (pp. 13-14); — The Odonata of Sideling Hill Creek (pp. 14-15); — Catling, P.M.: Evidence for a recent northward spread of *Enallagma civile* in New York state (p. 16); — Beckemeyer, R.: A brief history of the Plains Emerald, *Somatochlora ensigera* (pp. 17-20); — Donnelly, N.: *Enallagma cyathigerum* and vernale: species, subspecies, hybrids, all of the above, or none of the above?: you be the judge (pp. 20-22); — McPeeck, M.: Comments on *Enallagma cyathigerum* and vernale (pp. 22-23); — Tennesen, K.: Will the real *Enallagma vernale* please stand out? (pp. 23-24); — May, M.: Comments on *Enallagma* problems (p. 24); — Paulson, D.: Blue eye color and acetone (p. 25); — Donnelly, N.: Status of the North American Odonata Dot-Map Project: a call for assistance (pp. 27-29); — Corbet, P.: Dragonfly love (pp. 29-30; poem); — Beckemeyer, R.: "Tramea" (pp. 30-31; web review).

(12003) ASAHINA, S., 1998. Further notes on Odonata from northern Vietnam. 1. *Cordulegasteridae*. *Bull. natn. Sci. Mus., Tokyo* (A) 24(1): 11-16. — (Takadanobaba 4-4-24, Shinjuku-ku, Tokyo, 169-0075, JA).

Records, descriptions and figures of *Anotogaster klossi*, *Chlorogomphus auratus* and *C. takakuwai*.

(12004) BECKEMEYER, R.J. & D.G. HUGGINS, 1998. Checklist of Kansas damselflies [Zygoptera]. *Ks School Naturalist* 44(1): 1-16. — (First Author: 957 Perry St., Wichita, KS 67203-3141, USA; — Second Author: Kansas Biol. Surv., Univ. Kansas, 2041 Constant Ave., Lawrence, KS 66047-2906, USA).

This completes the odon. review of Kansas, the Anisoptera part of which is described in OA 11430. The treatment and the photographic documentation are the same as in the first part, covering 39 spp. An Addenda & Errata sheet is available from the Authors.

- (12005) BEDJANIČ, M., [Ed.], 1998. *Bloška planota, močvirni biser Notranjske*. – [Bloke Plateau, the moor pearl of Inner Carniola]. Slovene Odonatol. Soc., Ljubljana. 8 pp. (Slovene). – (Fram 117/A, SI-2313 Fram).
A folding brochure on the fauna and flora of this area in central Slovenia, with references to, and photographs of some dragonflies. For the treatment of the odon. fauna see OA 10834. – A book review was published in *Slovenske Novice* 8(58): 15; 1998.
- (12006) BEDJANIČ, M., [Ed.], 1998. Slovensko odonatološko društvo. – [Slovene Odonatological Society]. *Bull. reg. environ. Cent. central east. Eur.* 1998 (Apr.): 9-10. (Slovene). – (Fram 117/A, SI-2313 Fram).
A comprehensive outline of the set-up, activities and programs of the Society (established 1992), by its Past-President. With its 35 members, the Society is among the most active odonotol. regional organisations, producing 2 periodicals and other (irregular) publications, organising workshops, actively participating in various regional, national & international programs, etc. For its home page address see OA 12023.
- (12007) BERNIER, C., 1998. Odonata 44-85: l'Atlas contemporain (suite). *Lettre Atlas ent. rég. Nantes* 10: 144-146. – (8 allée des Tilleuls, F-44230 Saint-Sébastien-sur-Loire).
The continuation and conclusion of the paper listed in OA 11434.
- (12008) BICHUETTE, M.E. & F.M. SOUZA DOS SANTOS, 1998. Ecológicos da fauna de invertebrados da Gruta dos Paiva, Iporanga, SP. *Carste* 10(1): 15-19. – (Depto Zool., Inst. Biociên., Univ. São Paulo, Caixa Postal 11294, BR-05422-970 São Paulo, SP)
"Gomphidae larvae" are reported from the cave, Gruta dos Paiva, Iporanga, São Paulo, Brazil.
- (12009) BOUDOT, J.-P., 1998. Differences in male colour patterns between *Boyeria cretensis* Peters, 1991 and *B. irene* (Fonscolombe, 1838) (Odonata: Aeshnidae). *Opusc. zool. flumin.* 161: 1-3. – (Cent. Pédol. Biol., 17 rue Notre-Dame des Pauvres, B.P. 5, F-54501 Vandœuvre-lès-Nancy, France).
Based on the evidence derived from 2 *B. cretensis* ♂, the colour pattern in this sp., which has not been given due attention in the original description (cf. G. PETERS, 1991, *Dt ent. Z.*, [N.F.] 38: 161-196), is considered sufficiently distinct to merit the full species rank of this endemic taxon from the island of Crete, Greece. Figs of abdominal colour patterns in this sp. and in *B. irene* from Provence, southern France, are included.
- (12010) BROWN, T., 1998. *A survey of the dragonflies of eastern Norfolk for the season 1997*. Gt Yarmouth Naturalists' Soc., Gt Yarmouth. 22 pp. – (Author: 16 Mariners Park Close, Hopton, Gt Yarmouth, Norfolk, NR31 9DQ, UK).
Records and notes are presented for 20 spp. Of particular interest is the record of *Sympetrum flaveolum* and valuable are various field observations, e.g. on resting sites of *Brachytron pratense* (low growing shrubs and low growing trees), on behaviour of *Sympetrum striolatum*, etc. Also useful is the list of the first and last adult 1997 sightings in eastern Norfolk, UK.
- (12011) CHOVANEC, A., 1998. The composition of the dragonfly community (Insecta: Odonata) of a small artificial pond in Mödling (Lower Austria): seasonal variations and aspects of bioindication. *Lauterbornia* 32: 1-14. (With Germ. s.). – (Guntramsdorferstr. 41/24/1. A-2340 Mödling).
26 spp. are recorded (1996). The habitat, its odon. community composition and its seasonal variations are described and discussed in detail.
- (12012) CORBET, P.S., 1998. Préface. In: J. d'Aguilar & J.-L. Dommanget, Guide des libellules d'Europe et d'Afrique du Nord, pp. 5-6, Delachaux & Niestlé, Lausanne-Paris. – (Crean Mill, Crean, St Buryan, Cornwall, TR19 6HA, UK).
Invited Preface in the book listed in OA 12014.
- (12013) CORDERO, A., S. SANTOLAMAZZA CARBONE & C. UTZERI, 1998. Mating opportunities and mating costs are reduced in androchrome female damselflies, *Ischnura elegans* (Odonata). *Anim. Behav.* 33(1): 185-197. – (Third Author: Dipto Biol. Anim. & Uomo, Univ. Roma "La Sapienza", Viale dell'Università 32, I-00185 Roma).
In *I. elegans* 3 ♀ phenotypes occur, one of which has the same blue coloration as the ♂, whilst the others are inconspicuous brown gynochromes (infuscans and infuscans-obsolata morphs). By marking a natural population near Rome, Italy, it was found that all ♀ phenotypes have similar survivorship, but they differ in mating frequency. Androchromes represented 55% of ♀♀, but were involved in 43% of matings, whereas infuscans ♀♀ represented 27% of ♀♀ and 40% of matings and the infuscans-obsolata phenotype 18%

- of ♀♀ and 17% of matings. Old androchromes stored significantly less sperm in their spermatheca than old gynochromes, suggesting that they had mated less often. The majority of mature androchromes were observed alone (54%) when the majority of gynochromes (82-84%) were mating. When live tethered conspecifics were presented to ♂♂, blue models (♂ and androchrome ♀) were less attractive than brown models (gynochrome ♀♀). In contrast, all ♀ colour morphs and ♂♂ were equally (highly) attractive to ♂♂ when the models were dead. Androchromes were significantly larger than gynochromes. This evidence indicates that androchrome ♀♀ mate less often than gynochromes, which could be a means of avoiding unnecessary and costly matings, but some androchrome ♀♀ failed to reproduce (mate or oviposit) probably because they were unable to mate at all. The different explanations for the maintenance of this polymorphism in *I. elegans* are discussed.
- (12014) d'AGUILAR, J. & J.-L. DOMMANGET, 1998. *Guide des libellules d'Europe et d'Afrique du Nord: l'identification et la biologie de toutes les espèces*. Delachaux & Niestlé, Lausanne-Paris. 463 pp., col. pls incl. ISBN 2-603-01119-7. — Price: FF 240.- net.
With the assistance of J.-P. BOUDOT and H. HEIDEMANN, an updated, completely revised and much enlarged edn of the work listed in OA 5041.
- (12015) d'AGUILAR, J. & A. FRAVAL, 1998. Les mots de l'entomologie: glossaire progressif. *Insectes, Opie* 108(1): 23. — (Authors' addresses not stated). Includes a reference to *Mecistogaster marchali*.
- (12016) *DIGEST OF JAPANESE ODONATOLOGICAL SHORT COMMUNICATIONS*, No. 7 (Apr. 1998). — Edited & Published by N. Ishizawa (1644-15, Yamaguchi, Tokorozawa, Saitama, 359-1145, JA).
Arai, Y. & H. Kita: Ecological notes on *Gynacantha japonica* Barteneff at the paddy fields. 1 (pp. 1-4); — *Naraoka, H.*: Reproductive behavior of *Symplectma paedisca* *paedisca* (Odonata, Lestidae) (pp. 4-8).
- (12017) DIJKSTRA, K.-D.B., 1998. Libellen in Berheide en de Coepelduynen 1995-1997: drie jaar waarnemingen tussen Katwijk en Wassenaar. — [Dragonflies in Berheide and the Coepelduynen, 1995-1997: three years of observations between Katwijk and Wassenaar]. *Holland's Duinen* 32: 7-28. (Dutch). — (Oude Rijnsburgerweg 38, NL-2342 BC Oegstgeest). A comprehensive review of the odon. fauna (28 spp.) of the Netherlands coastal dune area between Katwijk-aan-Zee en Wassenaarse Slag (Zuid Holland prov.), with precise locality data and meticulous field observations.
- (12018) *DRAGONFLY RECORDER*. Newsletter of the Odonata Recording Scheme, No. 18 (Spring 1998). — (c/o J.N. Greatorex-Davies, Biol. Rec. Cent., ITE, Monks Wood, Abbots Ripton, Huntingdon, Cambs., PE17 2LS, UK).
[Signed articles:] *Cham, S.*: News from Anglia (pp. 4-5); — *Clarke, D.*: News from North (pp. 5-6); — *Parr, A.*: New migrants (pp. 7-8); — *Wain, C.*: Report from N. Hampshire, Surrey & Middx (p. 8); — *Winsland, D.*: News from South-West (p. 10); — *Smith, B.*: News from Scotland (p. 11); — *Averill, M.*: News from the Midlands (p. 12).
- (12019) EBERHARD, W.G., B.A. HUBER, R.L. RODRIGUEZ S., R.D. BRICENO, I. SALAS & V. RODRIGUEZ, 1998. One size fits all? relationships between the size and degree of variation in genitalia and other body parts in twenty species of insects and spiders. *Evolution* 52(2): 415-431. — (Second Author: Dept Ent., Am. Mus. Nat. Hist., Central Park West at 79th, New York, NY 10024, USA).
Hypotheses regarding the function of elaborate ♂ genitalia were tested in a sample of spp., incl. *Hetaerina fuscovittata*, by comparing their allometric values (slopes in log-log regression on indicators of body size with those of other body parts. ♂ genitalia consistently had lower slopes than other body parts. Perhaps as a consequence of this pattern, genitalic size also tended, though less consistently, to have lower coefficients of variation than did the size of other body parts. The morphological details of coupling between ♂♂ and ♀♀ in several spp. clearly indicated that selection favouring mechanical fit is not responsible for these trends. Sexual selection on ♂ courtship structures that are brought into contact with ♀♀ in precise ways may favour relatively low allometric values, in contrast to the high values seen in the other sexually selected characters (usually visual display devices) that have been studied previously, because a ♀'s own size will influence her perception of the contact courtship devices of a ♂.
- (12020) EDA, S., 1998. Annual review on entomology for 1997 in particular insect orders. Dragonflies. *Gekkan-Mushi* 327: 32-41. (Jap., with Engl. title). — (3-4-25 Sawamura, Matsumoto, Nagano, 390-0877, JA).

- A review of Japanese achievements in the homestead and in the world odonatology. For the previous sequel see OA 11567.
- (12021) ELLIS, H. / CAMERON, I., 1998. Dragonfly records. *Vasculum* 83(1): 15-16. — (Authors' addresses not stated).
5 records of 3 spp. from various localities in the northern parts of the UK.
- (12022) ELLIS, J., 1998. [Book review]. Field guide to the dragonflies and damselflies of Great Britain and Ireland, by S. Brooks. *J. Derbys. Notts. ent. Soc.* 131: 28. — (Author's address not stated).
The work listed in OA 11681 is reviewed, and compared with that described in OA 2062 and 4311.
- (12023) ERJAVECIA. [Newsletter of the Slovene Odonatological Society], Ljubljana, No. 5 (30 Apr. 1998). (Slovene). — (c/o M. Bedjanič, Fram 117/a, SI-2313 Fram).
28 pp. of various reports, announcements and brief communications. The address of the Society's home page is <http://www.ljudmila.org/retina/sod>. The issue also contains the reproduction of an ethnoodonatol. text (*J. Kelemina*, 1930) and the text of the Slovene species conservation Act.
- (12024) FLIEDNER, H., 1998. *Die Namegeber der europäischen Libellen*. Bremer Libellengruppe, Bremen. 56 pp. ISBN 3-00-002432-8. [Hefte der Bremer Libellengruppe, No. 6]. (With Latin & Engl. s.'s). — Price: DEM 8.-, postage excl. — (Available from the Author: Louis-Seegelken-Str. 106, D-28717 Bremen).
Brief biographies of the authors of the valid taxonomic generic and species-group names of European Odon., with a chronological list of descriptions.
- (12025) GEISSEN, H.-P., 1998. Die Schlammliege *Sialis nigripes* Ed. Pictet (Insecta: Megaloptera): Beginn der Besiedlung des Mittelrheins? *Fauna Flora Rheinland-Pfalz* 8(4): 1291-1295. (With Engl. s.). — (Brunnenstr. 34, D-56075 Koblenz-Stolzenfels).
Includes a reference to *Gomphus flavipes*, as listed in OA 11962.
- (12026) HEFTE DER BREMER LIBELLENGRUPPE, No. 5 (March 1998), No. 6 (March 1998). — (c/o J. Ruddek, Butendiek 34, D-28865 Lilienthal).
No. 5, see OA 12048; — No. 6, see OA 12024.
- (12027) *JOURNAL OF THE BRITISH DRAGONFLY SOCIETY*, Vol. 14, No. 1 (April 1998). — (c/o W.H. Wain, Haywain, Holywater Rd, Borden, Hants, GU35 0AD, UK).
Jenkins, D.K.: A population study of *Coenagrion mercuriale* (Charpentier) in the New Forest. 7. Mark/recapture used to determine the extent of local movement (pp. 1-4); — *Waring, E.*: Further sites for *Coenagrion pulchellum* (Vander Linden) (pp. 4-5); — *Beynon, T.G.*: Behaviour of immigrant *Sympetrum flaveolum* (L.) at breeding sites in 1995 and subsequent proof of breeding in 1996 (pp. 6-11); — *Murdoch, D.*: The size of the 1995 influx of *Sympetrum flaveolum* (L.) (pp. 11-12); — *Smith, P.H.*: Dispersion or migration of *Sympetrum danae* (Sulzer) in South Lancashire (pp. 12-14); — *Iles, I.S.*: An investigation into the affects of bank collapse and cattle trample on Odonata species at Okehurst on the river Arun, West Sussex (pp. 14-20); — *Beynon, T.G.*: Inverted emergence: a cautionary note (pp. 20-21); — *Batty, P.*: *Brachytron pratense* (Müller) in Mid-Argyll (pp. 21-28); — *Paul, J.*: On the mysterious occurrence of *Coenagrion mercuriale* (Charpentier) at Cothill (pp. 28-30); — *Garbutt, A.*: Hornet predation on a dragonfly (pp. 30-31); — *Paine, A.*: Notes and observations (pp. 31-32).
- (12028) KARUBE, H., 1998. A new species of the genus *Oligoaeschna* (Odonata, Aeshnidae) from north-east India. *Bull. Kanagawa prefect. Mus.* (Nat. Sci.) 27: 81-83. (With Jap. s.). — (Kanagawa Prefect. Mus. Nat. Hist., 499 Iryuda, Odawara, Kanagawa, 250, JA).
O. speciosa sp. n. is described and illustrated from a single ♂ (Darjeeling, 20-VI-1993; deposited in Author's institution). It is referable to the Lieftinck's "pryeri section", and it is compared here with *O. martini* (Laidlaw). *Aeshna nigripes* Navas is considered a synonym of *O. martini*.
- (12029) KEIM, C., 1998. Emergence hivernale d'Anax imperator Leach (Odonata: Aeshnidae) à Martigny (Valais, Suisse). *Bull. romand Ent.* 16(2): 57-64. (With Engl. s.). — (Finettes 10, CH-1920 Martigny).
A not fully coloured adult ♂ was taken near a man-made pond in Martigny, Switzerland, on 9-I-1998. The Author argues, the midwinter emergence was due to the relatively mild weather, prevailing in the area from Oct. 1997 through early Jan. 1998.
- (12030) KIAUTA, B., 1998. [Book review]. World catalogue of Odonata, Vols 1 & 2, by H. Steinmann. *J. zool. Syst. evol. Res.* 36, 1p. — (P.O. Box 256, NL-

- 3720 AG Bilthoven).
A comprehensive critical review of the work listed in OA 11618.
- (12031) KOTARAC, M., 1998. *Inventarizacija flore, favne in vegetacije na območju vojaškega poligona Mlake na odseku HC Vipava-Selo: Kačji pastirji (Odonata)*. – [Inventarisation of the flora, fauna and vegetation of the military training area Mlake, in the Hwy section, Vipava-Selo: Dragonflies (Odonata)]. Nat. Hist. Mus. Slovenia, Ljubljana. ii+4 pp. (Slovene). – (Antoličičeva 1, SI-2204 Miklavž-na-Dravskem-polju). 6 spp. (larvae), evidenced in Nov. 1997; – W Slovenia.
- (12032) La LETTRE DES SOCIÉTAIRES. Société française d'odonatologie, No. 14 (25 May 1998). – (c/o J.-L. Dommanget, 7 rue Lamartine, F-78390 Bois-d'Arcy).
Includes the report of the 1998 SFO Plenary Business Meeting, with the 1997 Balance Account of the Society. The membership is steadily increasing: from 274 in 1996, to 312 in 1997, and 354 by the end of Jan. 1998.
- (12033) MATERIAŁY ZJAZDOWE I KRAJOWE SEMINARIUM ODONATOLOGICZNE. – [ABSTRACTS OF PAPERS PRESENTED AT THE 1st NATIONAL COLLOQUIUM OF ODONATOLOGY], Bromierzyk, 17-19 Apr. 1998. Organising Committee: G. Tończyk, M. Klukowska, A. Piotrowska, K. Gonera & M. Osobka. Published by Sect. Odonatol. Polish Ent. Soc. & Inst. Limnol. a. Invert. Ecol., Univ. Lodz. 22 pp. (Polish).
[Engl. translation of titles:] Bernard, R.: Changes in the knowledge on the odonate fauna of Poland, as a result of the 1990-1997 studies (pp. 4-6); – Buczyński, P.: The dragonflies (Odonata) of middle-eastern Poland: the state of research, specificity and threats (pp. 7-9; with Engl. title & s.); – Mielewicz, S.: History of odonatological studies in Poland (pp. 10-13); – Tończyk, G.: The occurrence of rare dragonfly species (Odonata) in central Poland (pp. 14-17); – Szymański, J.: Analysis of the zonation of dragonfly occurrence (Odonata) in the "Krzywie" ponds near Lodz (p. 18); – Tończyk, G., M. Klukowska & K. Goldyn: Dragonflies (Odonata) of small pools and canals in the southwestern part of the Kampinoski National Park (pp. 19-21).
- (12034) [MAUFFRAY, B.] SIKES YOUNG, J., 1998. Realtor of the year is a dragonfly buff. *Gainesville Sun*, issue of 7 Febr. – (c/o B. Mauffray, Int. Odon. Res. Inst., DPI, P.O. Box 147100, Gainesville, FL 32614-7100, USA).
Based on an interview, this is a biographic article in a local daily on the work of B. Mauffray, Entomology graduate of the Louisiana State University, Manager of the International Odonata Research Institute, and a ReMax realtor at Gainesville, Florida. A portrait is included.
- (12035) MIELEWCZYK, S., 1998. Ważki (Odonata) Ojcowskiego Parku narodowego. – [Dragonflies (Odonata) of the Ojcowski National Park]. In: Mater. Symp. Bad. faun. Ojcowskim Parku narodowym, Ojcow, p. 22. (Polish). – (Res. Cent. Agric. & Forest Envir., Polish Acad. Sci., Bukowska 19, PO-60-809 Poznan).
During 1988-1990 19 spp. were evidenced, of which 10 are here reported for the first time from the Park, Poland.
- (12036) MUZÓN, J. & N. VON ELLENRIEDER, 1998. Odonata. In: J.J. Morrone & S. Coscarón, [Eds], Biodiversidad de artrópodos argentinos: una perspectiva biotaxonómica, pp. 14-25, Sur, La Plata. (Span., with Engl. s.). – (Inst. Limnol. "Dr R.A. Ringuelet", C.C. 712, AR-1900 La Plata).
A checklist of the 261 Argentine spp., with a brief outline of exploration history, systematics, biogeography, cytogenetics, and ecology of the regional odon. fauna, with a fairly exhaustive (but not entirely complete) bibliography.
- (12037) NEWSLETTER OF THE BRITISH DRAGONFLY SOCIETY, No. 33 (Spring 1998). – (c/o S. Henson, 10 Shotesham Rd, Poringland, Norwich, NR14 7LE, UK).
With this issue, S. Henson has taken over the editorship from J. Silsby, and the organisation of the newsletter has been slightly modified. The following are the main (section) titles: "From the Editor ..." (pp. 1-3); – "BDS Field Meetings for 1998" (pp. 3-5); – "1997 Annual General Meeting" (p. 6); – "Changes to the Board of Trustees" (pp. 6-7); – "1997 Members' Day" (pp. 7-8); – "1997 BDS Photographic Competition" (p. 8); – "First and last dates for 1997" (pp. 8-10); by A. Paine; – "News from the Dragonfly Conservation Group" (pp. 10-11); – Grants for young odonatists: the Philip Corbet Award Fund (p. 11); – "BDS projects" (pp. 11-12); – "Requests" (pp. 12-13); – "Short notes" (pp. 13-14); – "BDS business" (pp. 14-15); – "News from the National Dragonfly Museum"

(pp. 15-16); – “Recently published” (p. 16).

- (12038) *NORDISK ODONATOLOGISK FORUM NYHETSREVY – NORDIC ODONATOLOGICAL SOCIETY NEWSLETTER*, Vol. 4, No. 1 (May 1998). (In Nordic languages, with Engl. s's). – (c/o B.P. (Løfall, Aslign. 20B, N-1890 Rakkestad).
- Bagge, P.*: Welcome to the Fourth Nordic Meeting for Odonatologists at Konnevesi, Jyväskylä, Finland, June 26-28, 1998 (p. 3); – *Nielsen, O.F.*: dragonfly news from Denmark, 1997 (p. 4); – *Ivarsson, T.*: Some new distributional records of Swedish dragonflies (p. 5); – “*Sympetrum nigrescens*” found in Sweden (p. 6); – Note on hot weather behaviour of darter dragonflies (*Sympetrum*) in Sweden (p. 7); – *Olsvik, H.*: *Calopteryx virgo* and *Leucorrhinia rubicunda* in Møre & Romsdal, western Norway (p. 8); – *Saugestad, T.*: *Leucorrhinia pectoralis* (Charpentier, 1825) found in Hordaland, West Norway (p. 9); – *Olsvik, H.*: The distribution of Odonata in Finnmark (pp. 10-13); – Småstykker (p. 13); – Nytt fra Norge og Sverige 1997 (p. 13); – *Løfall, B.P.*: On the dragonfly season 1997 in Ostfold (pp. 14-15); – *Olsvik, H.*: Dragonflies of Møre & Romsdal, status per 1997, with a Red List (pp. 16-17); – *Olsvik, H.*: Nye norske insekt-frimerker (p. 18); – *Sympetrum “nigrescens”* (p. 18); – *Kullingsjö, O.*: Trollslände-dikt (p. 18; poem); – *Mailing list* (p. 19).
- (12039) NYLIN, S. & K. GOTTHARD, 1998. Plasticity in life-history traits. *Annu. Rev. Ent.* 43: 63-83. – (Dept Zool., Stockholm Univ., S-106 91 Stockholm). Dealing with the size, growth rate, reaction norm, fitness, etc., it includes passing textual and bibliographic references to the Odon.
- (12040) PAINTER, D., 1998. Effects of ditch management patterns on Odonata at Wicken Fen, Cambridgeshire, UK. *Biol. Conserv.* 84(2): 189-195. – (Consultants Environ. Sci., Sackville Pl., Magdalen St., Norwich, NR3 1JU, UK).
Patterns of adult and larval odon. distribution in relation to ditch management cycles were studied at Wicken Fen National Nature Reserve. The ditches are strikingly different in terms of their utilisation by Odon. Newly excavated sites with little shading from bankside vegetation are favoured by territorial ♂♂ and ovipositing ♀♀; densely reeded sites are rarely used by adults. However, ditches with abundant submerged and floating macrophytic growth support more larvae than newly excavated or deeply shaded sites with poor plant development. Rotations/clearance of ditches allows good displays of adult Odon. and breeding success to be achieved simultaneously on a reserve. Management implications for the conservation of Odon. are discussed.
- (12041) PAPAŽIAN, M., 1998. Comportement inhabituel de refus d'une femelle chez *Platycnemis pennipes* (Pallas, 1711) (Odonata, Platycnemididae). *Entomologiste* 54(1): 27-32. (With Engl. s.). – (Le Constellation Bât. A, 72 av. des Caillols, F-13012 Marseille).
An unreceptive ♀ rejected the ♂ by turning itself on the back, exposing to the ♂ the ventral part of abdomen and thorax. This behaviour is described, illustrated and analysed in detail.
- (12042) PETRANKA, J. & L. HAYES, 1998. Chemically mediated avoidance of a predatory odonate (*Anax junius*) by American toad (*Bufo americanus*) and wood frog (*Rana sylvatica*) tadpoles. *Behav. Ecol. Sociobiol.* 42(4): 263-271. – (Dept Biol., Univ. North Carolina, Asheville, NC 28804-3299, USA).
Predators can have significant nonlethal effects on prey by modifying prey behaviour through chemically mediated interactions. Behavioural responses of the tadpoles of the 2 anuran spp. to both direct and indirect chemical signals associated with the predatory *Anax* larvae were examined. In laboratory trials, tadpoles of both spp. responded strongly to water conditioned with *Anax* larvae by decreasing foraging rates, becoming immobile, and moving away from the stimulus. The responses to water conditioned with starved *Anax* versus *Anax* that fed on conspecific tadpoles did not differ significantly; these results suggest that tadpoles rely primarily on direct signals to detect odonates. *Rana* did not respond to water conditioned with conspecific tissue extracts, while *Bufo* responded with behaviours that were indistinguishable from those of tadpoles exposed to *Anax* chemicals. In a field experiment, the responses of *R. sylvatica* tadpoles to *Anax* chemicals were similar to those of tadpoles observed in the laboratory. Collectively, these data indicate that tadpoles of both spp. use chemical cues to assess predation risk from other community members. Tadpoles can selectively distinguish members who pose a threat, and only evacuate food patches or reduce foraging rates when in danger. These behaviours appear to be adaptive and are consistent with the predictions of optimality theory.
- (12043) PROESS, R., 1998. Erstnachweis von *Leucorrhinia caudalis* (Charpentier, 1840) (Zierliche

- Moosjungfer) in Luxembourg (Insecta, Odonata). *Bull. Soc. Nat. luxemb.* 99: 133-135. (With Engl. s.). – (1 rue du Moulin, L-7423 Dondelange).
- 1 ♂. Goepsweier (between the localities Bridel and Steinsel), 9-VI-1997. A detailed site description is provided.
- (12044) PROESS, R. & R. BADEN, 1998. Die Libellen der Fließgewässer Luxemburgs. 2: Süden und Osten des Landes (Insecta, Odonata). *Bull. Soc. Nat. luxemb.* 99: 119-132. (With Engl. s.). – (Second Author: Ecotop, 8 rue des Résidences, L-2434 Senningerberg). Subsequent to the survey of northern Luxembourg (cf. OA 11608), a review is given here of the odon. fauna of the streams in the southern and eastern parts of the country.
- (12045) PROESS, R. & R. GEREND, 1998. Rote Liste der Libellen Luxemburgs (2. Fassung: Stand 1998) (Insecta, Odonata). *Bull. Soc. Nat. luxemb.* 99: 137-148. (With Engl. s.). – (Second Author: 4 av. des Bains, L-5610 Mondorf). With reference to the preliminary Red List (OA 9855), the 61 Luxembourg spp. are classified into 8 categories: 13 spp. are considered extinct, and 17 are not threatened. Appended are brief descriptions and odon. assemblage lists of 10 "most important" dragonfly sites in Luxembourg.
- (12046) PUGELJ, T., 1998. Pot Gabernica – [The Gabernica path]. *Tabor, Ljubljana* 43(5/6): 40. (Slovene). – (Revija Tabor, Parmova 33, SI-1000 Ljubljana). *Libellula depressa* is recorded from the Gabernica stream nr Pišece, SE Slovenia.
- (12047) ROLFF, J., 1998. Better hosts dive: detachment of ectoparasitic water mites (Hydrachnellae: Arrenuridae) from damselflies (Odonata). *J. Insect Behav.* 10(6): 819-827. – (Zool. Inst., Univ. Braunschweig, Fasanenstr. 3, D-38092 Braunschweig). Experimental data are presented for the detachment rate of *Arrenurus cuspidator* larvae from *Coenagrion hastulatum* and *C. puella* in relation to the host's oviposition behaviour. *C. hastulatum* oviposits submerged, whereas *C. puella* oviposits at the water surface and aggregates with conspecifics. It was found that mite larvae detach at a significantly higher ratio from hosts with submerged oviposition. Experimental tests showed that this is not a species-specific effect. It is caused mainly by the oviposition behaviour. The results are discussed in the light of different oviposition systems in damselflies.
- (12048) RUDDEK, H., [Ed.], 1998. 17. Jahrestagung der GdO in Bremen: Tagungsband. Bremer Libellengruppe, Bremen. 40 pp. ISBN none. [Hefte der Bremer Libellengruppe, No. 5] – Price: DEM 8.-, postage excl. – (Available from the Editor: Butendiek 34, D-28865 Lilienthal). Allgemeine Informationen (p. 2); – Gesellschaft deutschsprachiger Odonatologen e.V. (GdO) (p. 3); – Tagungsprogramm (pp. 4-6); – Fotowettbewerb (p. 7); – Kurzbeiträge Dragonfly highlights - Notizen aus dem Feldbuch (p. 8); – GdO Mitgliederversammlung 1998 (p. 9); – Kurzfassungen der Vorträge: *Fliedner, H.*: Die Lüneburger Libellenfauna vor 150 Jahren (p. 10); – *Müller, J.*: Neuigkeiten zum Vorkommen von *Gomphus (Stylurus) flavipes* und *Ophiogomphus cecilia* in Elbe und Weser (pp. 10-11); – *Schütte, C.*: Diapause bei *Gomphus flavipes* und *Ophiogomphus cecilia* im Eistadium (p. 11); – *Handke, K. & J. Adena*: Zur Libellenfauna neu angelegter Gewässer im Bereich des Niedervielandes in Bremen (pp. 12-13); – *Wildermuth, H.*: Wie finden Vierfleck und Plattbauch zum Rendezvous? (pp. 13-14); – *Lindeboom, M.*: Territorialverhalten der Gebänderten Prachtlibelle *Calopteryx splendens* (p. 14); – *Leipelt, H.G. & M. Gasse*: Das Verhalten von *Aeshna affinis* in Norddeutschland (p. 14); – *Zeiss, C.*: Was kann der Mann? *Coenagrion puella*-Männchen als Prädatationsschutz für die Weibchen bei der Eiablage (p. 15); – *Buchwald, R., N. Böhler & A. Schmidt*: Welche Faktoren bestimmen die allo- und syntopen Vorkommen der Prachtlibellen am Oberrhein (Baden-Württemberg, Elsass)? (pp. 15-16); – *Klostermann, S.*: Ethoökologische Untersuchungen an *Onychogomphus forcipatus* (pp. 16-17); – *Werzinger, J.*: Biotop-Präferenzen von Imagines der Grüne Keiljungfer (*Ophiogomphus cecilia*) im engeren und weiteren Umfeld kleiner Flüsse und Bäche des nordwestlichen Mittelfranks (pp. 17-18); – *Perl, F.*: Eine ehemalige Sandgrube im Kreis Celle (Nds.): Lebensraum für die Späte Adonisl libelle, *Ceragrion tenellum* DeVill. (pp. 18-19); – *Stoks, R.*: Long term costs of lamellae loss in a damselfly (p. 19); – *Trockur, B.*: Stand der Libellenerfassung im Saarland (p. 20); – *Weihrauch, F.*: Die Emergenz von *Orthetrum coerulescens* (Fabr.) an einem Entwässerungsgraben des Flughafens München im Frühsommer 1997 (pp. 20-21); – *Klugkist, H.*: Ergebnisse mehrjähriger Emergenzuntersuchungen an *Aeshna viridis* und *Aeshna grandis* im Hollerland (Bremen) (p. 21); – *Schmidt, E.G.*: Invasionsarten (Sympetrum

- [Tarnetrum] *fonscolombii*, *S. flaveolum*, *Lestes barbarus* auf Amrum 1996/97 (pp. 21-22); – *Knitter, H.*: Der Zangegriff als Merkmal der Systematik und Phylogenie von Kleinlibellen (p. 22); – *Van Gossum, H., R. Stoks & L. De Bruyn*: Colour polymorphism limited to the females of the damselfly *Ischnura elegans* (p. 23); – *Willigalla, C.*: Ein Beitrag zur Ökologie von *Lestes dryas* Kirby 1890 (pp. 23-24); – *Kuhn, J.*: Libellen im Murnauer Moos (Oberbayern): Lebensräume und Naturschutzprobleme (pp. 24-25); – *Schiel, F.-J. & R. Buchwald*: Aktuelle Verbreitung, ökologische Ansprüche und Artenschutzprogramm von *Leucorrhinia pectoralis* (Charp.) im baden-württembergischen Alpenvorland (p. 25); – *Winterholler, M.*: Bestandsentwicklung ausgewählter südlicher Libellenarten in Bayern (pp. 25-26); – *Stephan, R.*: Untersuchungen im Tagebau Berzdorf (p. 26); – *Mauersberger, R.*: Versuch zur anthropogenen Populationsbegründung bei *Nehalennia speciosa* (p. 27); – *Kurzfasungen der Poster: Martens, A.*: Schliesst sich die grosse Lücke?: die derzeitigen Verbreitungsgrenzen von *Cercion lindenii* in Deutschland (p. 28); – *Martens, A. & M. Gasse*: *Aeshna affinis* in Deutschland: wie soll man die Funde interpretieren? (pp. 28-29); – *Geenen, S., K. Jordaens, R. Stoks & L. De Bruyn*: Morphological and genetical differentiation between populations of *Lestes viridis* (p. 29); – *Valck, F., R. Stoks & L. De Bruyn*: A mark-recapture study of imaginal *Sympetrum striolatum* (pp. 29-30). – *Teilnehmerliste* (pp. 31-34); – *Danksagung* (p. 35).
- (12049) SCHÖLL, F. & I. BALZER, 1998. Das Makrozoobenthos der deutschen Elbe 1992-1997. *Lauterbornia* 32: 113-129. (With Engl. s.). – (First Author: Bundesanst. Gewässererk., Kaiserin-Augusta-Anlagen 15-17, D-56068 Koblenz). Lists 6 odon. spp., from 6 sampling stations; Elbe R., Germany. Of particular interest is *Gomphus flavipes*, which is discussed in some detail.
- (12050) STEINWARZ, D., 1998. Beiträge zur Ökologie und Faunistik ausgewählter Insektengruppen (Insecta: Hymenoptera [Formicidae], Lepidoptera, Orthoptera, Odonata) des Eulenberges bei Hennef. *Decheniana* (Beih.) 34: 54-69. (With Engl. s.). – (Apolloniaweg 6, D-53773 Hennef). Includes a list of 8 odon. spp., with a brief discussion; Rhein-Sieg distr., Germany.
- (12051) STEINWARZ, D., 1998. Ökologische Untersuchungen an einem abgebauten Basaltvulkan im Niederen Westerwald (Eulenberg, Stadt Hennef, Rhein-Sieg-Kreis). Abschliessende Betrachtung. *Decheniana* (Beih.) 34: 94-95. – (Apolloniaweg 6, D-53773 Hennef). Concluding remarks, based on the paper listed in OA 12050, with a tentative suggestion re the meagre odon. fauna of the locality.
- (12052) STOLZENWALD, T. & R. SCHMIDT-BRÜCKEN, 1998. Das Makrozoobenthos des Schwabach und Trubach (Regnitz/Main). *Lauterbornia* 32: 131-149. (With Engl. s.). – (Marktplatz 10a, D-90543 Eckental). 19 odon. taxa are listed from 8 sampling stations; N Bavaria, Germany. Some of these, incl. *Ophiogomphus "serpentinus"* (= caecilia) are briefly discussed.
- (12053) TURK, R., 1998. Obalna mokrišča: izziv in priložnost. – [The Slovene coastal wetlands: a challenge and an opportunity]. *Delo* 40(4): 12, issue of 18 Feb. (Slovene). – (Author's address not stated). Includes a reference to the peculiar odon. fauna of Fiesa, Istria, Slovenia. – Cf. OA 9541, with bibl. references.
- (12054) UNO, N., 1998. [Dragonflies flying in winter in a botanical garden]. *Nature Study, Osaka* 44(1): 8. (Jap.). – (2-7-24, Kawanishi-cho, Takatsuki, Osaka Pref., 569-1133, JA). More than a dozen of *Orthetrum albistylum speciosum* and *Crocothemis servilia mariannae* individuals were found flying in a glass-house of the Municipal Botanical Gardens, "Sakuya-konohana-kan", in Osaka, at 11 a.m., on 25 Dec. 2 adult *Ischnura senegalensis* were also noticed perched on aquatic plants. The room and water temperature was 27° and 28°C, resp., the outside air temperature was 10°C. It is likely, these spp. are "autochthonous" in the glass-house ponds.
- (12055) UTZERI, C., A. CORDERO, S. SANTOLAMAZZA CARBONE, L. DELL'ANNA & L. MANCINI, 1998. *Somatochlora meridionalis* Nielsen, 1935 nel Lazio (Italia centrale), con note di autecologia e comportamento (Odonata: Corduliidae). *Opusc. zool. flumin.* 163: 1-16. (With Engl. s.). – (First Author: Dipto Biol. Anim. & Uomo, Univ. Roma "La Sapienza", Viale dell'Università 32, I-00185 Roma, RM). The 12 hitherto known Latium localities of the sp. are mapped. At 5 sites, in 2 streams, the temperature, pH, dissolved oxygen, oxygen saturation, conductivity and salinity were recorded, and the concentration of sulfite-

-reducing clostrydia was evidenced in water and in sediments by means of anaerobic culture on SPS-agar. In winter, during the larval stage, water was cool and oversaturated by oxygen, pH was over 8. Since water bodies with such pH values are uncommon in central Italy, the high alkalinity might present a restricting factor for larval growth, hence it could be responsible for the localised distribution of the sp. Mature individuals were recorded on the wing between early July and the second half of August, but the entire flight period, incl. the maturation time, probably extends from mid June to the end of August at least. Throughout this period, 13 odon. spp. were associated with *S. meridionalis* at 3 of its habitats. There is no evidence on territorial behaviour, ♂♂ search for ♀♀ in the shadedmost parts of the river banks. However, the copulation takes place either at the waterside or, in 1 case, it occurred 2 km off the water. This may suggest an unusual mating system in this sp. Intra-♂ sperm translocation behaviour was observed once, after tandem formation. The oviposition takes place at very sheltered and shaded sites, either in the water, or in the mud at the water edge. At times, ♀♀ can also repeatedly alternate several oviposition movements onto the ground (at a short distance from water) with a single one onto the water. — Eggs, deposited on 22 Aug. 1997, and reared first under natural conditions, and subsequently in the laboratory (15 h light period),

hatched after 29 days. The ♀ preference for very shaded oviposition sites might explain the literature reports on larvae, recovered from flooded caves and Etruscan tombs, although these can be carried into the caves by the surface streams as well.

- (12056) WEST, B., [Dragonfly haiku.] *Prijatelj* 6: 12 (Slovene). — (c/o Editor: Dr P. Repar, Cvibljje 15, SI-8350 Dolenjske toplice).

“Po polnočnem dežju / kačji pastirji pasejo jezero / - padajoče snežinke.”

- (12057) WILDERMUTH, H. & E. KNAPP, 1998. Die Libellen der Alp Flix (GR): ein Beitrag zur Odonatenfauna an der Waldgrenze. *Mitt. ent. Ges. Basel* 48(1): 2-24. (With engl. s.). — (First Author: Haltbergstr. 43, CH-8630 Rüti).

The odon. fauna of a small alpine plateau in Grisons, Central Alps, Switzerland (alt. 1900-2000 m) was surveyed (1989-1997). Out of the 18 recorded spp., 5 spp. were permanently, and 4 spp. temporarily indigenous. 19 structurally and ecologically distinct larval habitats are described. The upper limit of the vertical distribution is discussed. Because of their habitat requirements, *Lestes dryas* and *Sympetrum flaveolum* are of special interest. So is the co-occurrence of *Somatochlora alpestris*, *S. arctica* and *S. metallica* at the tree line.