

## ODONATOLOGICAL ABSTRACTS

### 1972

- (12715) EHRENDORFER, F., A. KALTENBACH, H. NIKLFELD & F. STARMÜHLNER, [Eds], 1972. *Naturgeschichte Wiens*, Vol. 2: *Naturnahe Landschaften, Pflanzen- und Tierwelt*. Jugend u. Volk, Wien-München. xv+909 pp. ISBN 3-7141-6113-9. — (Publishers: Tiefer Graben 7-9, A-1014 Wien).  
A 4-vol. monograph on geology, paleontology, climatology, plant and animal life, etc. of the city of Vienna and its broader region, Austria. The odon. are included in the treatments of various types of habitats and landscapes, but a regional checklist is not presented.
- (12716) HÖHN-OCHSNER, W., 1972. *Hinaus in die Natur: eine Einführung in die Lebensgemeinschaften der Pflanzen- und Tierwelt des Kantons Zürich*. Lehrmittelverlag Kt. Zürich, Zürich. 166 pp. (21.8×21.4 cm), hardcover. ISBN none.  
Directed at general readership, biotic communities, incl. those of the odon., are outlined of various types of aquatic habitats in canton Zürich, Switzerland. Of particular interest is the reference to *Epiteca bimaculata*. The locality is not stated, but in an earlier publication the Author reported it as being restricted to Wilersee (1948, *Ber. geobot. ForschInst. Rübel* 1947: 112-151).

### 1974

- (12717) PIETROPAOLO, J. & P.A. PIETROPAOLO, 1974. *The world of carnivorous plants*. Stoneridge, Shortsville/NY. 128 pp. (21.5×14.0 cm), softcover. ISBN none.  
Both the Zygopt. and the smaller Anisopt. often fall prey to sundews (*Drosera* spp.), cf. e.g. *OA* 470, 2958.

Here, no specific reference to the odon. is made, but the tentacles involved in insect capture and the trapping mechanism are meticulously described. The book deals with the Northamerican taxa.

- (12718) PORTMANN, A., 1974. *An den Grenzen des Wissens: vom Beitrag der Biologie zu einem neuen Weltbild*. Ex Libris, Zürich. 263 pp., 17 pls excl. ISBN 3-430-17599-2. — (Author deceased; for some obituaries see *OA* 4071).  
The book includes a number of references and background information on Author's PhD dissertation on the Odon. of Basel (1921), incl. the reproduction of the original draft of his figs on *Anax imperator* life history. For detailed information on his PhD work see *OA* 4141.

### 1975

- (12719) OGEN, M., 1975. *Mala antologija japonske lirike* — [A small anthology of the Japanese lyric]. Mladinska knjiga, Ljubljana. 141 pp. [Kondor series, 155], ISBN none. (Slovene).  
Includes the Author's Slovene translations of 3 classical dragonfly haiku (*M. Basho*, 1644-1694; *K. Issa*, 1763-1827; *E. Kikaku*, 1660-1707) and 1 tanka (*J. Akiko*, 1878-1942). A comprehensive essay and bibliography are also provided.

### 1980

- (12720) MATSURA, T., 1980. Responses to starvation in a mantis, *Paratenodera angustipennis* (L.). *Abstr. 16th Int. Congr. Ent., Kyoto*, p. 141 [abstract only]. — (Dept Biol., Kyoto Kyoiku Univ., Fushimi-ku, Kyoto, 612-0863, JA).  
The abstract includes no reference to the Odon., but

in the oral poster presentation it was stated that in rice fields in Japan, ♀ *P. angustipennis* catch ♂ and ♀ *Orthetrum albistylum speciosum* as they alight on the tips of rice plants, and in grassland ♀ of this sp. and of *P. ardifolia* catch *Sympetrum frequens* as the latter perch on sticks. — (This information appears on p. 328, in the book described in OA 12810).

### 1981

- (12721) BLACK, D., 1981. *Animal wonders of the World*. Orbis, London. 208 pp.  
A well-balanced collection of animal "portraits", to show the extent of animal diversity. The odon. are featured on pp. 176-179, incl. information on longevity (etc.) of *Pyrrhosoma nymphula*.

- (12722) SCHOTZ, M., 1981. Fotojagd auf Libellenlarven. *Tier-NaturFotogr.* 12(2): 19-23. — (Author's address unknown).  
Technical hints for dragonfly larvae photography in the aquarium.

### 1987

- (12723) KOHLER, J., 1987. Die Schmetterlinge der Boppelser Weid: gefährdete Schmetterlinge — gefährdete Landschaft; Ursachen, Zusammenhänge, Aussichten. *Mitt. heimat. Ver. Furtal* 17: 1-100. — (Lägernweg 2, CH-8107 Buchs/ZH).  
*Cordulegaster bidentata* is recorded from Boppelser Weid nr Buchs, canton Zürich, Switzerland.

### 1989

- (12724) VOS, K., 1989. *Assignment Japan: von Siebold, pioneer and collector*. SDU, The Hague. iii+107 pp., 121 figs (mostly col.) incl. (29.5×22.5 cm), softcover. ISBN 901206415.5.  
The life and work of Philipp Franz Balthasar von Siebold (1796-1866), and his ethnographic and other Japanese collections are outlined. Dr S. Asahina (1974, *Odonatologica* 3: 5-12) stated: "one may say that Japanese modern odonatology began with the collections of Siebold, whose Odon. material went to Leiden and then to Selys Longchamps ...". The book, actually, is a catalogue of a major exhibition organized in the National Museum of Ethnology, Leiden, showing some parts of von Siebold's Japanese collections. It includes a col. reproduction of "Dragonflies" from an album of paintings by Shunkei

Mori, and of a dragonfly page from Utamura Kitagawa's (ca 1753-1806) *Ehon mushi erami*, published in 1823.

### 1993

- (12725) ALCOCK, J., 1993. *Animal behavior: an evolutionary approach*. Sinauer Associates, Sunderland/MA. xiv+626 pp., 8 col. pls excl. [5th edn]. (26.0×18.0 cm), hardcover. ISBN 0-87893-017-5.  
The Author is a renown odonatologist. The Zygopt. are used as examples under the headings "The resource-holding power hypothesis", "The payoff asymmetry hypothesis", "Competition for eggs to fertilize", "The varieties of polygeny", and "Resource defense polygeny".

### 1994

- (12726) JEZIORSKI, P., 1994. Faunistic records from the Czech Republic, 14. Odonata: Corduliidae. *Klapalekiana* 30: 194. — (Na bělidle 1, CZ-73564 Habřov-Suchá).  
*Somatochlora flavomaculata* is for the first time recorded from Moravia, Czech Republic, viz. 1 ♂, Horní Benešov (26-VII-1937), and 1 ♂, Ludgeřovice (31-VII-1993).

- (12727) LØFALL, B.P., 1994. Nordisk øyestikkerkurs i Rakkestad 17-19 juni 1994 — [Nordic dragonfly workshop at Rakkestad, 17-19 June 1999]. *Natur Østfold* 13(1/2): 72-73. (Norwegian). — (Åsliveien 20 B, N-1890 Rakkestad).  
A fairly detailed report on the outdoor and indoor activities, with a group phot. of most of the 17 participants. *D. Dolmen, F. Johansson and G. Sahlen* were the speakers at the indoor meeting; — Rakkestad, Norway.

- (12728) SCHAAP, E.B., 1994. *Dutch floral tiles in the Golden Age and their botanical prints*. Gottmer & Becht, Bloemendaal. 183 pp., 72 col. & 97 monochrome figs incl. (28.0×23.0 cm), hardcover, wrappers. ISBN 90-230-0858-8. (Bilingual: Dutch/Engl.). — (Publishers: P.O. Box 160, NL-2060 AD Bloemendaal).  
The book focusses on the most active period of the tile production in the Netherlands, spanning the yr 1570-1670. It gives col. and black-and-white reproductions and detailed descriptions of "botanical" tiles, incl. several where the dragonfly is either the

main object of representation, or it is included in (mostly) a floral still life or some other composition. Also appended are concise biographies of the authors. – Dragonfly inventory: *pl. 25*: a polychrome dragonfly (1625-1640), with close resemblance to the engraving by Jacob Hoefnagel (1575-1630), after Joris Hoefnagel (1542-1600) in his *Architypa studiaque* (1592), but the identification as *Orthetrum cancellatum* is wrong; – *pl. 26*: a polychrome dragonfly, with great attention to the detail, by Jacob Hoefnagel (?); – *Fig. 46*: “Una hirundo non fecit ver”, engraving by Jacob Hoefnagel, after a drawing by Joris Hoefnagel in *Architypa studiaque* (Philadelphia Mus. Art); – *Fig. 60*: floral still life (1624), by Roelant Savery (1576-1639), oil on panel (Centraal Mus., Utrecht). – *Fig. 62*: “Occipedem ne excites”, authorship and deposition as *Fig. 46*; – *Fig. 68*: floral still life (ca 1618), by Ambrosius Bosschaert the Elder (1573-1621), oil on panel (Mauritshuis, The Hague); – *Fig. 80*: “Dedit mihi Dominus artem mercedem meam ...”, authorship and deposition as *Fig. 46*. – For dragonfly motifs on Dutch tiles of the 16th-18th cent. See *OA* 12193.

### 1995

- (12729) ANHOLT, B.R., 1995. Density dependence resolves the stream drift paradox. *Ecology* 76(7): 2235-2239. – (Dept Biol., Erindale Coll., Univ. Toronto, Mississauga, ON, L5L 1C6, CA). [Based on computer simulation; no taxa stated]. – The downstream displacement of individuals by drifting in the current is a prominent feature in the population biology of stream invertebrates. To compensate for the loss of individuals it has been proposed that adults of aquatic insects preferentially fly upstream to oviposit and thereby maintain populations. The observation of adult flight biased in the upstream direction has been advanced as confirmation of the hypothesis. It is argued here that upstream-biased dispersal is not sufficient for population persistence nor is it necessary. Population persistence can only be explained on the basis of density dependence at some point in the life cycle. Computer simulations showed that density dependence by itself is not sufficient for population persistence. Infrequent dispersal by randomly flying adults coupled with density dependence does allow population persistence. – Upstream-biased dispersal can be explained by increased individual fitness. If upstream reaches are depopulated by drift, these reaches provide more rapid growth to successful colonists. Computer simulations of competition for space by two genotypes that differ only in the directionality of dispersal showed that genotypes with upstream-biased dispersal always drove random dispersers to extinction.
- (12730) HONCU, M., 1995. Pruzkum váček (Odonata) na Českolipsku – Verbreitung der Libellen in der Umgebung von Česká Lipa (Böhm. Leipa). *Sb. Severočes. Muz. (Přir.)* 19: 113-121. (Czech, with Germ. s.). – (Okresni Muzeum, Česká Lipa, Czech Republic.). An annotated and commented list of 33 spp. from the region of Česká Lipa, Czech Republic. *Leucorrhinia caudalis* is recorded from Bohemia for the first time.
- (12731) LØFALL, B.P., H. OLSVIK & M. PETERSEN, 1995. Øyestikkere i Østfold: bibliografi og statusrapport 1994 – [Dragonflies in Østfold: bibliography and status report, 1994]. *Natur Østfold* 14(1): 86-91. (Norwegian). – (First Author: Åsliveien 20 B, N-1890 Rakkestad). An annotated review of the 42 spp. hitherto known from Østland, Norway, with a regional bibliography (38 titles, 1890-1995).
- (12732) MALIKOVA, E.I., 1995. *Strekozy (Insecta, Odonata) Dal'nego Vostoka Rossii* – [Dragonflies (Insecta, Odonata) of the Russian Far East]. PhD thesis, Inst. Anim. Syst. Ecol., Russ. Acad. Sci., Novosibirsk. 233 pp. (Russ.). – (c/o A.Yu. Haritonov, Inst. Anim. Syst. Ecol., Russ. Acad. Sci., Ul. Frunze 11, RUS-630091 Novosibirsk). Not available for abstracting; for a summary see *Odonatologica* 27: 375-381; 1998.
- (12733) PAVESI, M. & C. UTZERI, 1995. Arthropoda di Lampedusa, Linosa e Pantelleria (Canale di Sicilia, Mar Mediterraneo). Odonata. *Naturalista sicil.* 19 (Suppl.): 151-162. (With Engl. s.). – (Second Author: Dipto Biol. Anim. & Uomo, Univ. Roma “La Sapienza”, Viale dell’Università 32, I-00185 Roma). The 3 islands, located between Sicily and N Africa, possess few and only small freshwater bodies, hence only 7 odon. spp. are known to occur there. All known records are reviewed and discussed. The island of Pantelleria harbours the sole European population of *Ischnura fontaineae*.
- (12734) VAN EWIJK, T., 1995. *Beschermde planten en dieren in Nederland* – [Protected plants and animals in the Netherlands]. Kosmos & Z & K Uitgevers, Utrecht-Antwerpen. 142 pp. (24.5×17.5

cm), hardcover. ISBN 90-215-2534-8. (Dutch).  
On pp. 216-220, *Sympecma braueri*, *Aeshna viridis*, *Ophiogomphus cecilia*, *Stylurus flavipes*, *Oxygastra curtisii*, *Leucorrhinia albifrons*, *L. caudalis*, and *L. pectoralis* are listed, illustrated, and their occurrence, status, habitat requirements and threats in the Netherlands are briefly outlined. – For the national Red List see OA 12781.

### 1996

- (12735) PATRZICH, R., A. MALTEN & J. NITSCH, 1996. Rote Liste der Libellen (Odonata) Hessens. (1. Fassung, Stand: September 1995). Hessisches Ministerium des Innern, Wiesbaden. 24 pp. ISBN 3-89051-193-7. – (Publishers: Referat Presse, Friedrich-Ebert-Allee 12, D-65185 Wiesbaden).  
The status of the 62 spp. known to occur in the state of Hessen, Germany is analysed. 35 spp. are redlisted.

### 1997

- (12736) BEVANGER, K., 1997. [Book review] K. Aagaard og D. Dolmen, *Limnofauna norvegica. Fauna norv.* (B) 44(2): 106. (Norwegian) – (Author's address not stated).  
A comprehensive, critical review of the book, listed in OA 12497.
- (12737) GRETTLER, T. & W. OSTENDORP, 1997. Die Zoobenthon-Besiedlung künstlicher Uferschutzsubstrate am Bodensee. *Carolinea* 55: 23-34. (With Engl. s.). – (First Author: Bregenzer Str. 33, D-88171 Weiler).  
In the lake-shore protective constructions, artificial substrates such as geotextiles, gravel dams and sand mixtures are often used. Here, the macrozoobenthos on substrates of three 9-12 yr old shore protective constructions at Lake Constance, Germany, was compared with that on natural substrates. The occurrence of larval *Somatochlora metallica* is mentioned, but no quantitative data are presented.
- (12738) HONCU, M., 1997. PRůzkum vážek (Odonata) na území bývalého VVP Ralsko – Dragonflies (Odonata) of the former military training-grounds Ralsko. *Bezděz* 5: 269-277. (Czech, with Germ. & Engl. s's). – (Okresni Muzeum, Česká Lipa, Czech Republic).  
Records of 29 spp. (1985-1997); Česká Lipa distr., Bohemia, Czech Republic.

- (12739) MARTENS, A., 1997. Aktuelle Funde von *Cercion lindenii* in Salzgitter. *Halophila* 34: 3. – (Zool. Inst., Techn. Univ., Fasanenstr. 3, D-38092 Braunschweig).

An indicative summary of the paper listed in OA 11726.

- (12740) MATSUHIRA, K., Hisao IMAMURA & Hirotsugu IMAMURA, 1997. Koshikijima no tomboso, 1 – Dragonfly fauna of Koshiki Islands, Kagoshima prefecture, pt 1]. *Satsuma* 46(115): 1-16. (Jap., with taxonomic nomenclature). – (First Author: 4015-1, Tabeta, Kawanabe-cho, Kawanabe-gun, Kagoshima, 897-0221, JA).

In 1996 and 1997 the Authors visited these isolated islands 5 times. 44 spp. were recorded and are listed here. 13 of these are new for the fauna of the archipelago, but it is noted that no Corduliidae were found. – (For pt 2 see OA 12761).

- (12741) MÜLLER, J. & R. STEGLICH, 1997. *Aeshna affinis* hat 1996 zu 1997 erfolgreich überwintert. *Halophila* 34: 2. – (First Author: Frankefelde 3, D-39116 Magdeburg).

7 territorial ♂ were sighted on 3-VIII-1997 in the "Mittlere Elbe" Biosphere Reserve, indicating the sp. has survived the winter, therefore *A. affinis* is to be considered as an autochthonous member of the regional fauna now; – E Germany.

- (12742) MULLER, J. & R. STEGLICH, 1997. Ergebnis der "Aktion flavipes 1997". *Halophila* 34: 4. – (First Author: Frankefelde 3, D-39116 Magdeburg).

A systematic survey of the Elbe (in Saxony, Saxony-Anhalt, Brandenburg, Mecklenburg-Vorpommern, Lower Saxony and Schleswig-Holstein) and at the mouth of the Weser (Bremen) yielded (1997) over 300 larval and adult *Gomphus flavipes* specimens. The sp. is new for Saxony and Mecklenburg-Vorpommern, and it was recorded in Schleswig-Holstein after an interval of 85 yr. The precise localities are not stated; – Germany.

- (12743) RYCHNOVSKY, B., 1997. Další lokalita s výskytem vážky Čárkované (*Leucorrhinia dubia*) v České republice – Further locality with occurrence of *Leucorrhinia dubia* in Czech Republic. *Východočes. Sb. přír. Práce Studie* 5: 189-191. (Czech, with Engl. s.). – (Kat. Biol., Pedagog. Fak., Masaryk Univ., Poříčí 7, CZ-60300 Brno).

Records from 2 localities in Žďárské vrchy; 1991, 1994, 1997.

- (12744) SAMWAYS, M.J., 1997. Reserves do not guarantee survival from the vagaries of El Niño. *J. Insect Conserv.* 1(3): 145. — (School. Bot. & Zool., Fac. Sci. & Agric., Univ. Natal, Private Bag X01, Scottsville, Pietermaritzburg-3209, RSA).  
In South Africa, the 1990s have seen some huge weather swings from yr to yr, depending on the vagaries of El Niño. Although it was wet in 1989-1990, and very wet in 1996-1997, the 1992-1993 season was particularly dry. The drought caused not only vast changes in the odon. assemblage, but wholesale disappearance of some spp. At the magnificent Greater St Lucia Wetland Park, *Orthetrum robustum* and *Diplacodes deminuta*, both relatively rare, disappeared by 1993. Then, at Mpenjati Nature Reserve on the KwaZulu-Natal South Coast, *O. brachiale*, *O. guineense* and *O. hintzi* disappeared. The disappearance was due to a drop in water level in the marshes and a complete drying out of some pools. This immediately put into question the idea that reserves can guarantee survival. By Feb. 1997, water levels in the marshes had risen and pools reappeared. *O. robustum* returned, and so did other *Orthetrum* spp., but *O. trinacria* and *O. icteromelan* instead of *O. brachiale*, *O. guineense* and *O. hintzi*. *D. deminuta* has not been seen again, yet the rare *Aethriamanta rezia* and *Agriocnemis exilis* have appeared. There must be sources for these populations. For *O. robustum* at least, this appears to be exquisitely beautiful and remote Lake Bhanghazi North. Vigility is the key for these, at first sight, rather localized fliers. The savanna and wet subtropics are highly dynamic systems, and reserves may be population sinks rather than sources. One has to be aware of this, but it is difficult to record the fact when doing initial inventories. The upshot is that inventories must be followed by monitoring programmes.
- (12745) STEGLICH, R. & J. MULLER, 1997. Beobachtungen vom Nationalpark Neusiedler See und Umgebung in Ungarn und Österreich. *Halophila* 34: 3. — (Second Author: Frankefelde 3, D-39116 Magdeburg).  
*Anax parthenope* and *Orthetrum brunneum* are recorded from Neusiedler Lake, the Austrian (?) side. (Dept Biol. Sci., Univ. North Texas, Denton, TX 76203, USA).  
For an advance abstract see OA 12101. — Author's reprints are provided with Tab. I updated April 1999.
- (12747) AGÜERO PELEGRIN, M., A.F. HERRERA GRAO & M. FERRERAS ROMERO, 1998. Pléopteros y odonatos de la parte superior de la cuenca del río Hozgarganta. *Almoraima* 19: 241-248. (With Engl. s.). — (Third Author: Mejorana 2, ES-14012 Cordoba).  
24 odon. spp. are listed from the upper catchment of the Hozgarganta R., Spain. *Macromia splendens* and *Oxygastra curtisii* are of particular interest.
- (12748) ALZMANN, N., 1998. *Verhaltensökologische Untersuchungen an Gomphus pulchellus Selys, 1840 (Insecta, Odonata)*. DiplArb., Biol., Univ. Ulm. 80 pp. — (Abt. Biol.-III, Univ. Ulm, Albert-Einstein-Allee 11, D-89069 Ulm).  
For a journal publication see OA 12788.
- (12749) ANAZE, N., 1998. [*Anax guttatus* collected at Kada, Wakayama city]. *Kinokuni* 54: 17. (Jap.). — (522-2, Takara, Yukawa-cho, Gobo, Wakayama, 644-0011, JA).  
1 ♂, Yamada Pond, Kada; 11-X-1998. This is the second record from this pond and the eighth from Wakayama prefecture.
- (12750) DIMINICH, F. & M. GASPARINI, 1998. Macroinvertebrati e biomonitoraggio del fiume Judrio nel Friuli-Venezia Giulia (Italia nord-orientale). *Gortania* 20: 133-166. (With Engl. s.). — (Second Author: Dipto Biol., Univ. Trieste, Va E. Weiss 2, I-34127 Trieste).  
3 odon. taxa are listed from 7 sampling stations; Judrio R., Friuli-Venezia Giulia, NE Italy.
- (12751) DOLMEN, D., 1998. *Orthetrum cancellatum* (L.) (Odonata) rediscovered in Norway. *Fauna norv.* (B) 45(1/2): 114-115. (With Norweg. s.). — (Mus., Univ. Trondheim, N-7004 Trondheim).  
In the brackish-water lake, Langangsvatnet, in Arendal (salinity ca 1.5 ‰), several larvae and adults were recorded on 8/9-VII-1997.
- (12752) EDA, S., 1998. [Dragonfly diversity]. *New Ent.* 47(3/4): 64. (Jap.). — (Matsumoto Dental Univ., 1780, Gobara, Hirooka, Shiojiri-shi, 399-0781, JA).  
3 *Mnais* pruinosa infraspecific taxa in Nagano are used

## 1998

as an example.

- (12753) EDA, S. & W. MIYATA, 1998. [Tanypteryx pryeri at Miasa-mura]. *New Ent.* 47(3/4): 61. (Jap.).  
— (First Author: Matsumoto Dental Univ., 1780, Gobara, Hirooka, Shiojiri-shi, 399-0781, JA).  
In 1997 and 1998, 2 ♂ and 1 ♀ were evidenced at Misa-mura, Kita-azumi-gun, Nagano pref. These are the first records in the area.
- (12754) ENVIRONMENT PRESERVATION BUREAU, YOKOHAMA, [Eds], 1998. [*Let us construct a dragonfly pond*]. Envir. Preserv. Bureau, Yokohama. 42 pp. (29.2×20.8 cm), softcover. ISBN none. (Jap.). — (Publishers: 1-1, Minato-cho, Naka-ku, Yokohama, 231-0017, JA).  
A comprehensive and well illustrated guide for dragonfly pond constructions, with technical details of various pond types, and including also a review of odon. spp. that are commonly visiting the ponds in the Yokohama city area. — (*Abstractor's Note*: Most of the text was provided by S. Mori.)
- (12755) EZAKI, Y. & T. TANAKA, [Eds], 1998. *Mizube Kankyo no Hozen-Seibutsu gunshu no shitenkara* — [*Conservation of biotic communities in rivers, ponds and paddy fields*]. Asakura Shoten, Tokyo. x+222 pp., 4 col. pls excl. (25.5×18.3 cm), softcover, ISBN 4-254-10154-6. — Price: ¥ 5800.— net. (Jap., with Jap. vernacular odon. nomenclature). — (Publishers: 6-29 Shin-ogawa-machi, Shinjuku-ku, Tokyo, 162-0814, JA).  
The book deals with the Japanese fauna and contains 12 papers; 2 of these are related to the Odon., 2 others include some references to the Order, viz.: Uéda, T.: Odonate community in ponds (pp. 17-33); — Odonate community in paddy fields (pp. 93-110); — Hibi, N., T. Yamamoto & M. Yuhma: Life of aquatic insects in a man-made aquatic system (pp. 111-124); — Tanida, K.: Benthic animal community, mainly aquatic insects (pp. 195-216). — (*Abstractor's Note*: An unabridged Engl. translation of Uéda's papers, by N. Ishizawa, is in preparation.)
- (12756) GORKIČ, M., A. CERNATIČ & M. STUPAR, 1998. *Naravni spomenik Mlake: strokovne osnove za razglasitev* — [*Natural Monument Mlake: technical documentation for its promulgation*]. Government document, produced by Zavod za varstvo naravne in kulturne dediščine Gorica, Nova Gorica. iv+13 pp., 3 fold. maps & 6 pls excl. (Slovene). — (Not for general circulation; — Authors: c/o Zavod za varstvo naravne in kulturne dediščine, Delpinova 16, SI-5000 Nova Gorica).  
The area, Mlake, is situated in the communities of Vipava and Podnanos, W Slovenia. So far 27 odon. spp. were there evidenced, of which 7 spp. are redlisted in Slovenia. 8 spp. are listed and emphasized. — See also OA 12031.
- (12757) HASLETT, J.R., 1998. *Suggested additions to the invertebrate species listed in appendix II of the Bern Convention. Final report to the Council of Europe*. Council of Europe [T-PVS(98)9], Strasbourg. 113 pp. — (Author: Inst. Zool., Univ. Salzburg, Austria).  
A documented proposal for *Epallage fatime*, *Coenagrion caerulescens*, *C. scitulum*, *Gomphus schneideri*, *Onychogomphus costae*, *O. uncatus*, *Cordulegaster charpentieri*, and *C. heros*.
- (12758) HAYASHI, K., 1998. [Running water dragonfly fauna of Niigata prefecture]. *Trans. Essa ent. Soc., Niigata* 80: 47-57. (Jap., with taxonomic nomenclature). — (2364 Miyagawa, Kashiwazaki, Niigata, 945-0402, JA).  
The Japanese running water odon. spp. are characterised by 6 features, viz. (1) they are mainly of old origin and endemic to Japan, (2) the body is black, with yellow stripes, (3) long larval development, (4) less tolerant to water pollution, (5) most spp. emerge at other than oviposition localities, and (6) larvae of some spp. travel downstream. — All 17 E Japanese gomphid spp. were recorded in Niigata prefecture, 14 of these are endemic to Japan.
- (12759) HUNGER, H., 1998. *Biozöologische Untersuchungen zum Habitatschema der Pokal-Azurjungfer (Cercion lindenii Selys, 1840) in der südlichen Oberrheinebene*. *Naturschutz südl. Oberrhein* 2: 159-166. (With Engl. s.). — (Inst. Naturschutz, INULA, Am Pfahlgraben 8, D-79276 Reute).  
In the Upper Rhine lowlands, Germany, the sp. is common, occurring mostly in large waters, characterized by the impact of ground water or by slow current. In shallow sections, the water temperature is high in the summer. In the southern parts of the Upper Rhine region, it is a typical sp. of gravel pits, river arms and oxbows. For oviposition, parts of helophytes or floating debris are used where the aquatic vegetation is poor, therefore it is able to breed in freshly-made

- gravel pits and in almost vegetation-free angling ponds. *C. lindenii* tolerates stronger wave action than *Erythromma viridulum*, since it tends to use vertical structures for emergence, though it can emerge on horizontal supports as well.
- (12760) HUNGER, H., 1998. Biozöologische Untersuchungen zum Habitatschema des Kleinen Granatauges (*Erythromma viridulum* Charpentier, 1840) in der südlichen Oberrheinebene. *Naturschutz südl. Oberrhein* 2: 149-158. (With Engl. s.). — (Inst. Naturschutz, INULA, Am Pfahlgraben 8, D-79276 Reute).  
In the Upper Rhine lowlands, Germany, the sp. inhabits a variety of stagnant waters, such as ponds, gravel pits, and oxbow sections with slow water movement. Reproduction sites have to be furnished with fine-leaved submerged vegetation. The hydrophytes have to reach the surface at least partly and during a certain period of time. Adversary factors for colonization are: insufficient warming of water during the summer, strong inflow of ground or surface water, and wave action. Waters that are ice-free during the winter are usually too cool during the summer. The protection of aquatic vegetation (threatened by fishing, boating and swimming) is considered the principal means of conservation of *E. viridulum*.
- (12761) IMAMURA, Hisao & K. MATSUHIRA, 1998. Koshikijima no tomoso, 2 — [Dragonfly fauna of Koshiki Islands, Kagoshima prefecture, pt 2]. *Satsuma* 47(118): 47-57. (Jap., with taxonomic nomenclature). — (Second Author: 4015-1, Tabeta, Kawanabe-cho, Kawanabe-gun, Kagoshima, 897-0221, JA).  
The Authors visited Kami-koshiki Island in the Koshiki Archipelago 3 times in 1998 (May-Oct.). 27 spp. were recorded, 3 of which for the first time. — (For pt 1 see OA 12740).
- (12762) JEZIORSKI, P., 1998. Check list of dragonflies (Odonata) of the Czech Republic. *Čas. slez. Muz. Opava* (A) 47(2): 173-177. (With Czech s.). — (Na bělidle 1, CZ-73564 Haviřov-Suchá).  
69 spp. are listed (68 for Bohemia, 67 for Moravia), of which the record of *Coenagrion mercuriale* is uncertain. The previously reported *Aeshna viridis* is based on an identification error, therefore it is omitted here.
- (12763) KALKMAN, V.J., R. KETELAAR & M. REEMER, 1998. *Libellen van de Rode lijst in Gelderland* — [*The Netherlands' redlisted dragonflies in the province of Gelderland*]. EIS, Leiden & De Vlinderstichting, Wageningen. vi+52 pp. (Dutch). — (Available from: EIS-Nederland, P.O. Box 9517, NL-2300 RA Leiden).  
24 out of the 27 in the Netherlands redlisted odon. spp. (cf. OA 12781) have ever been recorded in Gelderland, but 5 of these are at present extinct in the province. In the booklet, an almost monographic treatment of habitat requirements and the provincial status of the 24 spp. is provided.
- (12764) KAPPES, W., 1998. Äthiopien: naturkundliche Reisenotizen 20.12.1997-4.1.1998. *Naturk. Reiseber.* 11: 1-126. — (Eichenweg 4, D-22395 Hamburg-Bergstedt).  
The odon. chapter appears on pp. 109-114. Locality data and dates are listed for 15 spp.; most of them are documented by col. photographs. A topographic map of the localities is also provided; — Ethiopia.
- (12765) KIM, J.-H., 1998. *The Odonata & Orthoptera, etc. of Korea in color*. Kyo-Hak Publ. Co., Seoul. 480 pp., col. pls incl. (19.5x14 cm), wrappers & dustjacket. ISBN 89-09-05467-1. — Price in Japan: ¥ 8750.— net. (Korean, with Engl. title & taxonomic nomenclature). — (Publishers: 105-67, Kongd k-dong, Map'o-gu, Seoul, Korea; — In Japan available at: Ato-Shoten Gyomu Center, Kyodo Bldg 1F, 2-18-7, Higashi-Ueno, Taito-ku, Tokyo, 110-0015).  
This is probably the first commercially available odon. field guide for N & S Korea, covering 86 spp. (plus 65 spp. of Orthoptera, Mantodea and Phasmida). The descriptions are enhanced by ca 700 col. photographs, and a distribution map is provided for each sp. Technically, the book is superbly produced, but there are several misidentifications and spelling errors in taxonomic names.
- (12766) LAKE BIWA MUSEUM, [Eds], 1998. *Shiga, a treasure-house of dragonflies*. Lake Biwa Mus., Kasatsu. 32 pp., col. pls incl. (29.5x20.7 cm), softcover. ISBN none. (Jap., with Engl. title & vernacular nomenclature). — (Publishers: 1091, Oroshimo, Kasatsu, Shiga, 525-0001, JA).  
A guide for the 5th Special Exhibition, held 18 July-23 Sept. 1998 at the Museum. It gives a concise outline of odon. biology, includes 98 species portraits, some distribution maps, etc.
- (12767) MAES, J.-M., 1998. *Catalogo de los insectos*

- y arthropodos terrestres de Nicaragua*, Vol. 1. Asoc. Nicaraguense Ent., León. xvi+486 pp. (27.3×20.5 cm), softcover. ISBN none. — Price US \$ 45.— net. — (Author: Mus. Ent., Serv. Entomol. Auton., A.P. 527, León, Nicaragua).  
On pp. 23-40, 99 odon. spp. are catalogued. Some synonymy, brief statements on distribution, and the regional bibliography are provided. — For earlier catalogues see OA 7244 and 7748:
- (12768) NIEDRINGHAUS, R. & B. ZANDER, 1998. Die Kleingewässer der Ostfriesischen Inseln: Zustandsanalyse und ökologische Bewertung anhand der Flora/Vegetation und der Wirbellosenfauna. *SchrReihe NatPark Niedersächs. Wattenmeer* 3: 1-270. — (First Author: Fachber. Biol., Univ. Oldenburg, Postfach 2503, D-26111 Oldenburg).  
A monograph on freshwater invertebrate fauna and ecology of the East Friesian islands of Borkum, Juist, Norderney, Baltrum, Langeoog, Spiekeroog and Wangerooge; Northsea, Germany. The odon. are dealt with in much detail, and their occurrence (37 spp.) is also island-wise reviewed.
- (12769) PEREPELOV, E.A., A.B. BUGROV & E. WARCHALOWSKA-SLIWA, 1998. C-banded karyotypes of some dragonfly species from Russia. *Folia biol., Kraków* 46(3/4): 137-142. — (First Author: Dept Nat. Sci., Novosibirsk St. Univ., Ul. Pirogov 2, RUS-630090 Novosibirsk).  
*Aeshna viridis*, *Cordulia aenea* and *Libellula quadrimaculata* (from the Novosibirsk area), *Calopteryx splendens*, *Libellula depressa*, *Orthetrum albistylum* and *O. brunneum* (from northern Caucasus), and *Ophiogomphus cecilia* (from Sakhalin), all ♂♂, were studied. In general, 3 types of terminal heterochromatin distribution within autosomes can be postulated, viz. (1) small C-blocks, observable in the pachytene rather than in metaphase I, occurring in *Aeshna*, but rarely in other spp., (2) large, symmetric C-blocks, often found in various spp., and (3) large asymmetric C-blocks. The *Libellulinae* are characterized by the occurrence of the intercalary C-blocks, on a single chromosome pair in *Libellula*, and on 2 bivalents in *Orthetrum*. *C. aenea* has the subterminal blocks near the terminal ones. The X is heterochromatic for its entire length in vast majority of the spp., the original X-part of the neo-XY bivalent in *A. viridis* is also entirely heterochromatic. *L. depressa* and *C. splendens* possess an euchromatic X, with large terminal C-blocks. Although it is not easy to demonstrate C-bands in the holokinetic chromosomes, it is emphasized that the C-banding features could be used to considerable advantage in the search for cytogenetic similarities and differences on various taxonomic levels.
- (12770) [PROCEEDINGS OF THE 9th DRAGONFLY CITIZEN SUMMIT], Kobe, 1998. v+170 pp. (Jap.). — (c/o K. Inoue, 5-9, Fuminosato 4-chome, Abeno-ku, Osaka, 545-0004, JA).  
Includes a very comprehensive record of the activities and presentations.
- (12771) RAAB, R., 1998. Die Libellen- und Vogelfauna im Waldviertel. *Forschungsber. WWF Österreich* 15: 9-46. (With Engl. s.). — (Anton-Brucknergasse 2/2, A-2232 Deutsch-Wagram).  
42 odon. spp. were evidenced during 1997-1998 at 12 wetland areas in the Waldviertel, Lower Austria. *Ophiogomphus cecilia* and *Leucorrhinia pectoralis* are of particular interest.
- (12772) RADEMACHER, M., 1998. Bioökologische Untersuchungen zur Habitatpräferenz der Fledermaus-Azurjungfer (*Coenagrion pulchellum*). *Naturschutz südl. Oberrhein* 2: 119-128. (With Engl. s.). — (Friesenh. Hauptstr. 20, D-77948 Friesenheim).  
The study was conducted in the southern and middle Upper Rhine valley, Germany. Physical, chemical and vegetation parameters were considered. The sp. colonizes mainly older stagnant waters, with well-developed aquatic vegetation. Oviposition and emergence sites are characterized by floating vegetation (*Nymphaeion*, whether or not in association with *Phragmition* and *Magnocaricion*) and are moderately shaded by overhanging woody vegetation.
- (12773) RADEMACHER, M., 1998. Untersuchungen zum Schlupf- und Eiablagehabitat der Gemeinen Winterlibelle (*Sympetma fusca*) am südlichen und mittleren Oberrhein und mögliche Schutzmaßnahmen. *Naturschutz südl. Oberrhein* 2: 107-118. (With Engl. s.). — (Friesenh. Hauptstr. 20, D-77948 Friesenheim).  
Based on the analysis of 33 breeding habitats in the southern and middle Upper Rhine valley, Germany, the sp. requires the sites with a more or less extensive *Phragmition* and *Magnocaricion*, mixed intensely with aquatic vegetation. The vegetation has to be submerged during April/May-July/Aug., with 40% of emerged vegetation during the oviposition period. A prerequisite is also the presence of some floating fresh or dead



plant material. The sites have to be sun-exposed, the shading should not exceed 10%. Compared to the surrounding areas, water temperature at the *S. fusca* oviposition sites is markedly high.

- (12774) SATOH, R., 1998. [Dragonfly fauna of Niigata prefecture]. *Trans. Essa ent. Soc., Niigata* 80: 35-46. (Jap., checklist with vernacular nomenclature). — (2-6, Senaminaka-machi, Murakami, Niigata, 958-0024, JA).

A commented list of 100 spp., not incl. *Calopteryx japonica*, *Libellula angelina* and *Sympetrum uniforme*, which are considered recently extinct in the prefecture. Niigata is the species-richest prefecture in Japan.

- (12775) SCHAFFNER, A.K. & B.R. ANHOLT, 1998.

Influence of predator presence and prey density on behavior and growth of damselfly larvae (*Ischnura elegans*) (Odonata: Zygoptera). *J. Insect Behav.* 11(6): 793-809. — (Second Author: Dept Biol., Univ. Victoria, Victoria, BC, V8W 3N5, CA).

Foraging behaviour is often determined by the conflicting benefits of energy gain and the risk of mortality from predation or other causes. Theory predicts that animals should have lower activity levels when either the risk of predation or the availability of resources in the environment is high. The adjustment of the behaviour of *I. elegans* larvae to predator presence (*Anax imperator*) and prey density (*Daphnia* sp.) and their interaction in a completely crossed factorial experiment in the lab and the effect of behaviour on growth were investigated. The foraging activity of the *I. elegans* larvae was significantly reduced in the presence of a free-swimming predator but not a caged predator. Abdominal movements were significantly reduced at a low prey density. Growth was significantly reduced by the presence of a free swimming predator and low prey densities. These results provide evidence that these damselfly larvae adjust their behaviour to the presence of predators to increase their survival at the expense of reduced growth and development.

- (12776) SCHIEL, F.-J., 1998. Zur Habitatbindung der Becher-Azurjungfer (*Enallagma cyathigerum* Charpentier, 1840) (Odonata: Zygoptera) am südlichen Oberrhein. *Naturschutz südl. Oberrhein* 2: 139-147. (With Engl. s.). — (Inst. Naturschutz, INULA, Friesenh. Hauptstr. 20, D-77948 Friesenheim).

The habitat requirements were investigated in the Upper Rhine valley and in the northern Black Forest,

Germany. The sp. breeds exclusively in stagnant waters, 42% of breeding sites are characterised by oligo-mesotrophic vegetation. Some vertical vegetation structures are required on the shoreline. The smallest water body harbouring a large population had a surface of ca 80 m<sup>2</sup>. The other morphological, physical and hydrochemical parameters do not influence the occurrence of the sp. In most of the habitats studied fish were abundant.

- (12777) SCHIEL, F.-J., 1998. Zur Habitatbindung des Grossen Granatages (Erythromma najas Hansemann, 1823) (Zygoptera: Coenagrionidae) am südlichen Oberrhein. *Naturschutz südl. Oberrhein* 2: 129-138. (With Engl. s.). — (Inst. Naturschutz, INULA, Friesenh. Hauptstr. 20, D-77948 Friesenheim).

At 24 localities in the Upper Rhine valley, Germany, floating vegetation (*Nuphar lutea*, *Nymphaea alba*) provides the most important feature of the habitat. *Hydrocharis morsus-ranae* is a good alternative, and some reeds along the shoreline are required. Most breeding sites are shallow oxbows in the vicinity of a forest. Changes in the water table level may amount up to 2.3 m. Hydrochemical parameters: pH 7.2-8.3, total hardness 8.8-17.6 dH, conductivity 280-705 µS/cm. Larval tolerance to the low oxygen levels (down to 2% concentration at the surface) is remarkable.

- (12778) SHANTI SUSANTI, 1998. *Mengenal capung* — [Introducing the dragonfly]. LIPI/Wetlands Int.-Indonesia Progr., Bogor. xii+82 pp. (10.7×14.5 cm), softcover, ISBN 979-579-012-9. (Indonesian, with taxonomic nomenclature). — (Publishers: Wetlands International-Indonesia Programme, Jln Arzimar III/No. 17, Bogor-161 52, Indonesia).

An attractive, little booklet, giving a general outline of dragonfly biology, with a simple, well illustrated identification key and the descriptions (with col. aquarelle portraits) of 16 in the Bogor area (Java) common spp. — The titles of the main chapters are: "Meeting the dragonfly" (pp. 1-37); "Where they live" (pp. 6-7), "Habitat" (pp. 8-13), "Life history" (pp. 14-17), "Interesting behaviour" (pp. 18-21), "Useful to mankind" (pp. 22-29), "Conservation" (pp. 30-31), "How to identify dragonflies" (pp. 32-33), "Dragonfly watching" (pp. 34-37); — "Dragonfly morphology" (pp. 38-41); — "Simple identification key to the species common in Bogor" (pp. 42-58); — "Species descriptions" (pp. 60-77). — A list of References and a Glossary conclude the booklet. — In Indonesian, the dragonfly is called "capung" (cf. also OA 118,

- where the Dutch spelling is used). Of particular interest is the chapter on the usefulness of dragonflies. On p. 23 it is stated that in Madagascar, Indonesia and Malaysia they are used as aphrodisiac. The Indonesian villagers often use green dragonflies as a remedy when a child wets the bed (alive dragonfly, held at folded wings, is to be put on child's navel, in order it would scratch it by its legs). The Reference list includes 2 other recent Indonesian dragonfly books and 2 papers (1996, 1997; all in Indonesian, and none available for abstracting).
- (12779) SHARAPOVA, T.A., 1998. Zoobentos i zooperifiton reki Irtysh. — Zoobentos and zooperiphyton of the river Irtysh. *Gidrobiol. Zh.* 34(4): 32-44. (Russ., with Engl. title in contents table). — (Inst. Problem osvoeniya Severa, Siber. Branch, Russ. Acad. Sci., Tyumen', Russia).  
Gomphus flavipes is the sole odon. sp. listed; — Irtysh R., Siberia, Russia, 1987-1990.
- (12780) SYMNET. The newsletter of the Aka-tombo network, Ishikawa, No. 7 (dated 20 Nov. 1998, received 20 Aug. 1999). (Jap., Engl. & online edns). — (c/o N. Ishizawa, 1644-15, Yamaguchi, Tokorozawa, Saitama, 359-1145, JA).  
[Titles & pagination from the Engl. edn:] Uéda, T.: Gokuraku-tombo: why is tomo a happy-go-lucky-fellow? (pp. 1-2); — Takagawa, M.: An essay on Anotogaster sieboldii (p. 2); — Tone, S.: Mature female of Sympetrum frequens collected at the summit of Mt Gozaisho in mid-July (p. 3); — Takasaki, Y.: Sympetrum infuscatum collected in Tokyo Bay (p. 3); — Tsubuki, T.: My late first and the last records of Sympetrum frequens at Hino City, Tokyo in 1997 (p. 3); — Ishizawa, N.: Morphological differences between Sympetrum depressiusculum and Sympetrum frequens (pp. 3-4); — Body temperatures of the pairs of Sympetrum frequens, in which the female is larger than the male (p. 5); — Sympetrum frequens at Omori flood controlling pond, 2 (pp. 5-6); — Uéda, T.: Swarming up flight of Sympetrum frequens from the emerged rice paddies (pp. 6-7); — Ishizawa, N.: Observations of Aka-tombo at Otemachi, Tokyo in 1998 (pp. 7-8); — Tsubuki, T.: The record of Sympetrum frequens preyed by Anotogaster sieboldii and preyed parts (p. 8).
- (12781) VAN AARTSEN, J.J. [Minister of Agriculture, Nature Management and Fishery], 1998. Rode lijst van libellen — [Dragonfly Red List]. *Staatscourant* 1998 (65): 11; 3 April. (Dutch).  
The official Netherlands Odonata Red List (27 spp.).
- (12782) WESTERMANN, K. & S. WESTERMANN, 1998. Verbreitung und Bestandsdichte der Kleinen Zanglibelle (*Onychogomphus forcipatus*) in der südbadischen Rheinniederung zwischen Basel und Strassburg: Dokumentation der Exuvienfunde. *Naturschutz südl. Oberrhein* 2: 167-180. (With Engl. s.). — (First Author: Buchenweg 2, D-79365 Rheinhausen).  
The distribution and population density of *O. forcipatus* in the S Baden alluvial plain of the Rhine R. (between Basel and Strasbourg) are described, based on the 1994-1995 exuvia records. The sp. occurs regularly at running water sections with high stream velocity and/or turbulent water. In large populations, the emergence localities reach downstream, to low velocity sections and even to places with barraged current. Some of the indicated localities are considered among the most important breeding sites of the sp. in central Europe.
- (12783) YAMAMOTO, H. & K. NAKATANI, 1998. *Anax guttatus* presumably carried by typhoon. *Nature Study, Osaka* 44(12): 6. (Jap.). — (First Author: Nishi 3-271, Hamadera, Suwanomori-cho, Sakai, Osaka pref., 592-8347, JA).  
8 ♂ were sighted at the Nagai Bot. Gardens, 1-X-1998. In the Postscript, I. Kanazawa (Osaka Mus. Nat. Hist., 1-23, Nagai Park, Hidashi-sumiyoshi-ku, Osaka, 546-0034, JA) refers to a dead ♀, recovered in Sakai, 26-IX-1998. It is assumed, the insects have been carried by typhoon, or they have emerged locally from eggs oviposited by immigrants.

## 1999

- (12784) ABSTRACTS OF PAPERS AND POSTERS, 1999 International Congress of Odonatology and 1st Symposium of the Worldwide Dragonfly Association, July 11-16, Colgate University, Hamilton, NY, USA. iv+29 pp. — (c/o Dr V. McMillan, Dept Biol., Colgate Univ., Hamilton, NY 13346, USA).  
*Andrew, R.J.*: The post-ovarian genital complex in *Ictinogomphus rapax* (Rambur) (Anisoptera: Gomphidae) (p. 1); — Surface ultrastructure of the egg chorion in some Indian dragonflies (Anisoptera) (p. 1); — Unusual incidence of sperm displacement in monandrous *Ischnura aurora* (Brauer) (Zygoptera: Coenagrionidae) (p. 1); — *Beckemeyer, R.J.*: The

- Odonata fauna of the Great Plains states: a status report (p. 2); – Flight-related morphology of some nearctic Odonata (p. 2); – *Carpenter, V.*: Effectiveness of exuvial counts in monitoring a rare dragonfly (p. 2); – *Cashatt, E.D. & T.E. Vogt*: Description of the larva of Hine's Emerald dragonfly (*Somatochlora hineana* Williamson) (p. 3); – *Chippindale, P.T. & J.V. Robinson*: Phylogenetic relationships, biogeography, and speciation patterns of North American damselflies of the genus *Ischnura* (p. 3); – *Clausnitzer, V.*: Interspecific competition at small rainforest pools (p. 3); – *Corbet, P.S.*: Voltinism of Odonata (p. 4); – *Dijkstra, K.-D.B.*: The atlas of Dutch Odonata: results and prospectives (p. 4); – *Donnelly, T.W.*: Intergradation between *Enallagma cyathigerum* and *vernale* in northeastern North America: widespread hybridization between sibling species with different habitat preferences (p. 5); – *Ferreras-Romero, M. & P.S. Corbet*: Life-cycles of coexisting dragonfly populations in a stream in southern Spain, Mediterranean area (p. 5); – *Fincke, O.M. & H. Hadrys*: Realized fitness and its consequences for parental strategies in a giant damselfly, *Megalopterus coeruleus* (p. 6); – *Frolich, K.*: Distribution of odonate larvae in relation to chemical parameters in eastern New York state: implications for conservation (p. 6; title only); – *Gennard, D. & J. Dixon*: Observations on the influence of meteorological and habitat conditions on the flight activity of three damselflies, *Ischnura elegans*, *Coenagrion puella* and *Lestes sponsa* (p. 6); – *Grissom, B., P. Chippindale & J.V. Robinson*: Identification and utilization of microsatellite loci in North America *ischnurans* (p. 7); – *Hartung, M.*: A historical collection of the Odonata of Missouri (p. 7); – *Hawking, J.H. & T.R. New*: The dragonfly (Insecta: Odonata) larval assemblage from Middle Creek, north-eastern Victoria, Australia (p. 7); – *Hirata, M.*: Correlations between the densities of single males, ovipositing females, copulation and emergence in *Leucorrhinia intermedia* *ijimai* (p. 8); – *Hoekstra, J.D.*: Conservation and ecology of *Argia sabina* (Zygoptera: Coenagrionidae), an Arizona stream damselfly (p. 8); – *Joedicke, R.*: The *Sympetrum* "decoloratum" enigma: status of taxonomic research (p. 9); – *Johnson, D.M.*: Overview of the draft recovery plan for Hine's Emerald Dragonfly (p. 9); – *Matsura, T.*: The assemblage of dragonfly larvae coexisting in an artificial pond in an urban area (p. 10); – *May, M.L.*: Phylogeny of *Enallagma* (Zygoptera: Coenagrionidae) and some related genera (p. 10); – Comparative morphology of the secondary male genitalia of selected Libellulidea (Anisoptera) (p. 11); – *McMillan, V.E.*: Aggregating behavior during oviposition in the dragonfly *Sympetrum vicinum* (Hagen) (Anisoptera: Libellulidae) (p. 11); – *Moore, N.W.*: Battles between males of four aeshnid species by a small pond: does interspecific fighting have any biological significance (p. 12); – *Morgan, J., J.V. Robinson & P. Chippindale*: Evolutionary history and biogeography of damselflies of the genus *Ischnura* (p. 12); – *Osborn, R.*: The effect of habitat complexity and predators on damselfly agonistic interactions (p. 12); – A comparative analysis of the pterostigma of selected species of coenagrionid damselflies (p. 13); – *Parr, M.J.*: The terminology of female polymorphs of *Ischnura* (Zygoptera: Coenagrionidae) (p. 13); – *Paulson, D.*: Patterns of odonate biodiversity (p. 13); – *Perpelov, E.A. & A.G. Bugrov*: C-banding technique in cytotaxonomy of dragonflies (p. 14); – *Pintor, L.M., D.A. Soluk & S.A. Miller*: Comparison of the nocturnal behavior of aquatic insects under red and infrared light (p. 14); – *Purdue, J.R., E.D. Cashatt & T.E. Vogt*: Variability of the mitochondrial DNA in current and past populations of the endangered Hine's Emerald Dragonfly (*Somatochlora hineana*): the impact of postglacial dispersal (p. 14); – *Reece, B.A.*: Modeling larval dragonfly seasonal mortality (p. 15); – *Rehn, A.*: A phylogenetic analysis of higher level relationships in Odonata (p. 15); – *Robinson, J.V. & M.L. Price*: Toward an understanding of the functional morphology of some larval Anisoptera: jet propulsion and body shape (p. 15); – *Sahlén, G. & K. Ekestubbe*: Selecting dragonflies as indicators of high biodiversity (p. 16); – *Scales, J. & D. Paulson*: A comparative study of damselfly foraging behavior, and a hypothesis to explain the open-wing position of *Lestes* (p. 16); – *Schneider, W. & H.J. Dumont*: The Odonata of the Soqatra Archipelago (Republic of Yemen) (p. 16); – *Schofield, L. & P.J. Mill*: *Calopteryx splendens* and other riverine species in northern England (p. 17); – *Sherk, T. & G.H. Rau*: Emergence of Odonata from Findley Lake in the Cascade Mountains during warm and cold years (p. 17); – *Smith, B.P., K.E. Muma & M.R.L. Forbes*: Rooting for the underdog: do parasitic mites afford an advantage to a less common species of potentially competing dragonfly hosts? (p. 17); – *Soluk, D.A. & L.M. Pintor*: Dragons in distress: life history and ecology of the endangered Hine's Emerald Dragonfly (*Somatochlora hineana*: Corduliidae) (p. 18); – *Srivastava, V.K.*: Structure of the secondary copulatory apparatus and the functional role of its

- components in *Ischnura rufostigma* Selys (Zygoptera: Coenagrionidae) (p. 18); – *Thomas, J.M. & M. Daniel*: Comparative studies on the morphology of the proventricular armature of three species of dragonflies (Anisoptera: Odonata) (p. 18); – *Tillotson, I. & H. Ubukata*: The management of wetlands with special reference to the conservation of dragonfly habitats (p. 19); – *Trybula, J. & S.I. Guttman*: The distribution and genetic structure of larval gomphid populations exposed to acid mine drainage in a stream basin in Ohio (p. 19); – *Ubukata, H. & I.J.L. Tillotson*: Environmental education using dragonflies related to wetland management (p. 20); – *Van Tol, J.*: Chlorocyphidae in Sulawesi (p. 20); – *Vogt, T.E., J.R. Rurdue & E.D. Cashatt*: Phylogeny and systematics of Somatochlora (Anisoptera: Corduliidae) based upon mitochondrial DNA (p. 20); – *Watanabe, M.*: Reproductive success of male damselflies, *Mnais pruinosa costalis* Selys, showing a wing dimorphism (p. 21); – *Wilson, K.D.P. & G.T. Reels*: Dragonflies as indicators of wetland biodiversity in tropical China (p. 21); – *Worthington, A.H. & R.M. Olberg*: Visual tracking and prey pursuit in dragonflies (p. 22). – I n f o r m a l presentations: *Dijkstra, K.-D.B.*: Springtime impressions from the undisturbed river system of the Pripyat, Belarus (p. 23; title only); – *Hartung, M.*: Video sequences of feeding strategies of *Sympetrum* and *Aeshna* (p. 23); – *Hawking, J.*: WDA's 3rd international symposium of odonatology, 2003: Australia? (p. 23; title only); – *Hoekstra, J.D.*: A tale of two damselflies, or odonate conservation in arid lands (p. 23); – *Inoue, K.*: Odonate fauna of Guam and Saipan islands, Marianas, USA (p. 23; title only); – *Norling, K. & U. Norling*: Kitegraph: a life-cycle illustrator program (p. 24) – *Paulson, D.*: Dragonflies down under (p. 24; title only); – *Rith-Najarian, J.*: Introduction to common dragonflies of New York (p. 24; title only); – *Sahlén, G. & A. Sahlén*: An invitation to the WDA's 2nd international symposium of odonatology, Gallivåre, Sweden, 2001 (p. 24; title only). – L i s t of participants (pp. 25-29). – See also OA 12821
- (12785) *AESCHNA*, Osaka, No. 35 (25 March 1999). ISSN 1341-1047. (Jap., with Engl. titles & s's). – (c/o K. Inoue, 4-9, Fuminosato 4-chome, Abeno-ku, Osaka, 545-0004, JA).  
*Kitagawa, M.*: Mr Wako Kitawaki in memoriam (pp. 1-2); – *Yoshida, M.*: Collecting and breeding data of some odonate larvae, 2nd report (pp. 3-8); – *Katatani, N. & A. Muraki*: Records of the Odonata taken in Palau, pt 2 (pp. 9-22); – *Kishi, K.*: Records of the Odonata of Bali Island, Indonesia (pp. 23-35); – *Muraki, A. & K. Fujimoto*: A record of *Sympetrum cordulegaster* (Selys) from Nagano prefecture in 1997 (p. 36); – *Aoki, T. & S. Kondoh*: A note on reproductive behaviour of *Sympetrum striolatum imitoides* Barteneff in Kobe (pp. 37-40); – *Kitagawa, K.*: Rediscovery of *Linaeschna polli* from Borneo (pp. 41-42); – *Suda, S.*: A record of *Macromia urania* Ris from Taiwan (p. 43); – *Matsuda, I.*: A record of the dragonflies newly caught in Kohama Island, the Ryukyus (p. 44); – A record of *Rhyothemis variegata imperatrix* Selys with developed dark marks on the wings (pp. 45-46); – *Futahashi, R.*: Late records of *Crocthemis servilia mariannae* Kiauta and *Aeschnophlebia longistigma* Selys (pp. 47-48); – *Yokoyama, T.*: Notes on the duration of the egg stages in some dragonflies in Hokkaido (pp. 49-50); – *Itoh, S.*: A male *Aeshna juncea* (Linnaeus) that misidentified a dead branch as a female (p. 51); – *Moriyasu, T.*: A record of larva of *Macromia daimoji* Okumura from Oita prefecture, Kyushu, Japan (p. 52); – *Yoshida, K.*: New localities of *Macromia daimoji* Okumura from Shikoku (pp. 53-55); – *Sugitani, A.*: Cherish the memory of Mr Hiroshi Itoh (p. 56).
- (12786) ALLEN, G. & J. DENSLow, 1999. *Določevalni ključ: sladkovodne živali – Clue books: freshwater animals*. Tehniška založba Slovenije, Ljubljana. 80 pp., ISBN 86-365-0287-X. (Slovene). Slovene edn of the Engl. work, published originally by Oxford Univ. Press, 1997, and translated by J. Štrus. Odon. larvae and adults are briefly dealt with, using the Slovene "common" nomenclature.
- (12787) ALLEN, G. & J. DENSLow, 1999. *Določevalni ključ: žuželke – Clue books: insects*. Tehniška založba Slovenije, Ljubljana. 80 pp., ISBN 86-365-0285-3. (Slovene). Slovene edn of the Engl. work, published originally by Oxford Univ. Press, 1997, and translated by R. Verovnik. Some common odon. spp. are "keyed" and illustrated, using the Slovene "common" nomenclature.
- (12788) ALZMANN, N., B. KÖHLER & G. MAIER, 1999. Spatial distribution, food and activity of *Gomphus pulchellus* Selys, 1840 (Insecta; Odonata; Gomphidae) from a still water habitat. *Int. Revue Hydrobiol.* 84(3): 299-313. – (Third Author: Dept Biol.-III, Univ. Ulm, Albert-Einstein-Allee 11, D-

-89069 Ulm).

Distribution patterns of larvae in different sediments, with different density of prey organisms, were studied in the field in a small gravel pit lake in S Germany. Larval burrowing behaviour at different temperatures as well as food preference, consumption rates and activity were studied in laboratory experiments. In the study lake, larvae lived exclusively in places where macrophytes were present and in fine sediments (mean grain size <3 mm) with detritus cover. There was a significant positive correlation between larval density and density of food organisms, suggesting that abundance of food is one of the determinants of larval distribution. In late autumn larvae migrated to deeper places probably to survive the winter. Low temperatures, simulated in laboratory experiments, did not induce larvae to burrow deeper. Larvae were always found in a sediment depth of 0.59-0.74 cm. Experiments with mixed prey showed that they preferred tubificid worms and chironomid larvae over gammarids and ephemeropterid larvae. However, chironomid larvae which stayed in their tubes had a higher survival rate than those outside of tubes. Single-prey experiments showed that *G. pulchellus* larvae can prey not only on benthic spp. but also on *Daphnia* from the open water. Functional-response experiments showed that larva consumes a maximum of 2-3 tubificid worms or chironomid larvae per day, which corresponds to a maximum biomass (freshweight) of 5-30 mg/day. Video recordings of activity showed that larvae cover long distances of up to 52 m per night on the substrate surface and that activity on the substrate surface started after midnight and ceased before sunrise. Consumption of zooplankton prey and high activity above the substrate is interpreted as an adaptation to the life in still water habitats.

- (12789) ARAI, Y., H. KITA & K. KANO, 1999. *Dragonflies of four seasons*. Musashi no Satoyama Kenkyukai, Tokyo. 88 pp. (19.0x24.5 cm), hardcover, wrappers. ISBN none. — Price: ¥ 2800.— net. (Jap., with Engl. title & taxonomic nomenclature). — (Publishers: 1233-2 Sueno, Yori-machi, Osato-gun, Saitama, 369-1205, JA; — Unabridged Engl. translation, by N. Ishizawa, is available from the translator: 1644-15, Yamaguchi, Tokorozawa, Saitama, 350-1145, JA). Basically, this is an album of field portraits, by 16 authors, with captions and some explanatory text, authored as follows: *Arai, Y.*: Introduction (p. 3); — *Dragonflies of four seasons* (pp. 4-77); — Threatened

dragonflies (pp. 79-83); — *Kita, H.*: Dragonfly life history (pp. 84-85); — *Kanoh, K.*: Dragonfly photography (pp. 86-87). — Some of the photographs are aesthetically or technically superb, some are unique documents of biological peculiarities of the respective spp.

- (12790) *ATROPOS* ["The UK's premier journal for active Lepidoptera and Odonata enthusiasts"], No. 8 (Aug. 1999). — (36 Tinker Lane, Meltham, Huddersfield, W Yorks, HD7 3EX, UK). [Odon. articles:] *Turnore, M.*: From the Editor's trap (pp. 1-2; *Anax parthenope*, *Sympetrum sanguineum*); — *Heath, P.*: The past and present status of Norfolk Hawker *Aeshna isosceles* Müll. in Britain (pp. 13-21); — *Parr, A.*: Potential new Odonata for the British list, 2: The possibility of vagrant or colonist damselflies (pp. 21-25); — *Hill, P.M.*: Migrant insects reported during the first half of 1999 (pp. 35-36); — *Beynon, T.*: Site guide: Saltwell LNR, Staffordshire (pp. 45-47); — *Parr, A.*: Norfolk Damselfly *Coenagrion armatum* rediscovered in the Netherlands (p. 52); — *Beynon, T.*: First emergence dates for White-faced Darter *Leucorrhinia dubia* and Four-spotted Chaser *Libellula quadrimaculata* 1994-1999 at Chartley Moss NNR, Staffordshire (pp. 52-53); — *Hill, P.M.*: Early emergence of White-faced Darter *Leucorrhinia dubia* in Cheshire in 1999 (p. 53); — *Parr, A.*: Odonata Records Committee news (p. 53; *Anax parthenope*); — [Book review] *De danske guldsmede*, by O.F. Nielsen (pp. 62-63); — [Book review] *The dragonflies and damselflies of Pagham Harbour Local Nature Reserve*, by L.G. Holloway (p. 63).
- (12791) BAIERL, E., 1999. *Bibliographie der Libellenliteratur Nordrhein-Westfalens (stand: März 1999)*. A.K. Libellen Nordrhein-Westfalen, Ratingen. ii+44 pp. — (Neisser Str. 3, D-40880 Ratingen). Ca 620 titles, published since 1850.
- (12792) BAKER, D.B., 1999. The localities of I.A. Scopoli's *Entomologia carniolica* (1763). *Ent. Gaz.* 50(3): 188-198. — (Hope Ent. Collns, Univ. Mus. Nat. Hist., Oxford, OX1 3PW, UK). Some biographic notes on I.A. Scopoli (1723-1788) and the current orthographic names of some of the localities, as stated in his 1763 work (for the reprint edn see OA 729), are provided. The former Austrian duchy, "Carniola", is part of modern Slovenia. As apparent from the Acknowledgements, the Slovene entomologists were not consulted, therefore the list of

- orthographic names is incomplete and some information is wrong. Thus, Scopoli's "Vochein" stands for the district of Bohinj rather than for the village of Bohinjska Bistrica, Mt Greben is located in the Kamnik Alps rather than in the Triglav range, and the correct spelling of "Veldeser See" is Blejsko jezero. Insect specimens from the surroundings of Ljubljana (= "Labacum") were supplied to Scopoli by F.X. Wulfen: *Libellula quadrimaculata* is among these, it is the sole odon. sp. for which the precise locality is stated ("in fossis circa Labacum"). – The most comprehensive biography, evaluation of work and the complete Scopoli's bibliography were published by V. Petkovšek (1977, *Diss. Acad. Sci. Art. slov.* [IV] 20/2: 1-104, 3 fold. graphs excl.), but this work was not considered here. The Author also used the obsolete 1941 topographic map of Slovenia rather than the recentmost 1998 topographic atlas. – See also OA 10813.
- (12793) BAKER, R.L., C.M. ELKIN & H.A. BRENNAN, 1999. Aggressive interactions and risk of fish predation for larval damselflies. *J. Insect Behav.* 12(2): 213-223. – (Dept Zool., Univ. Toronto, Mississauga, ON, L5L 1C6, CA).  
Larval Zygopt. frequently engage in aggressive interactions that may increase their risk of fish predation. To test this, the behaviour of larval *Ischnura verticalis*, exposed to both conspecifics and fish predators, was analyzed. Larvae in the presence of conspecifics oriented, struck, and swam more but crawled less compared to solitary larvae; the presence of fish reduced or tended to reduce, all behaviours. Fish struck more at interacting larvae compared to noninteracting larvae. Increased attack rate by fish likely reflects the increase in the very active swimming behaviour by larvae and suggests a conflict between antipredator behaviours. Swimming is an appropriate response to avoid predation by odonate larvae which normally ambush prey but is clearly dangerous when fast-swimming fish that cue in on movement are nearby.
- (12794) BECKEMEYER, R.J., 1999. *Checklist of Kansas Odonata*. 6 pp. Brochure circulated at the 1999 Int. Congr. Odonatol., Hamilton. – (957 Perry St., Wichita, KS 67203-3141, USA).  
124 spp. (revised 17 March 1999).
- (12795) BEDJANIČ, M., 1999. Kačji pastirji: pisano življenje med vodo in nebom – Dragonflies: a colorful life between the water and the sky. *Proteus, Ljubljana* 62(1): 8-17, 47. (Slovene, with Engl. s.). – (Fram 117/A, SI-2313 Fram).  
A beautiful general presentation of the Order, with emphasis on the fauna of Slovenia, and with an editorial biographic note on the Author, incl. a portrait.
- (12796) BEDJANIČ, M., 1999. [Krajski park Rački ribniki-Požeg:] Kačji pastirji – [Landscape park Rački ribniki:] Dragonflies. *In: M. Vogrin & N. Vogrin, [Eds], Krajski park Rački ribniki-Požeg*, pp. 68-75 (text), 124-125 (annotated checklist), 142 (Engl. s.), DPPVN, Rače, ISBN none. (Slovene, with Engl. s.). – (Fram 117/A, SI-2313 Fram).  
A review of the fauna (49 spp.), Styria, E Slovenia, with species-wise annotations on the regional and national status.
- (12797) BEDJANIČ, M., 1999. Slovensko odonatološko društvo – The Slovene Odonatological Society. *Proteus, Ljubljana* 62(1): 14, 47. (Slovene, with Engl. title in contents table). – (Fram 117/A, SI-2313 Fram).  
A detailed outline of the history, set-up, activities and objectives of the Society, by its Past-President and the Ed. of its periodicals, *Erjavecija* (semiannual newsletter) and *Exuviae* (semiannual journal). The Society was founded in 1992, and has at present over 40 members.
- (12798) BEDJANIČ, M., 1999. Zival meseca septembra: stasiti kamenjak (*Sympetrum depressiusculum*) – The creature of the month in September: *Sympetrum depressiusculum*. *Proteus, Ljubljana* 62(1): 36-38, 47. (Slovene, with Engl. title in contents table). – (Fram 117/A, SI-2313 Fram).  
In Slovenia, the sp. is known from ca 10 localities and it is considered threatened. Larger populations occur at 4 localities in E Slovenia, which are listed here. The biology is described in detail, and a pictorial key for identification of the 9 Slovene *Sympetrum* spp. is provided.
- (12799) BEDJANIČ, M., A. PIRNAT & A. ŠALAMUN, 1999. Kačji pastirji širšega območja ob reki Dravi – [Dragonflies of the broader area along the Drava river]. *In: M. Govedič, [Ed.], Raziskovalni tabor študentov biologije Središče ob Dravi '97*, pp. 31-37, Zveza za tehnično kulturo Slovenije, Ljubljana, ISBN 961-6243-12-8. (Slovene). – (First Author: Fram 117/A, SI-2313 Fram).  
A commented list is presented of 40 spp., evidenced (1997) along the Drava R., between the cities of Ptuj

- and Središče-ob-Dravi, Styria, E Slovenia. *Orthetrum coerulescens* and *O. ramburi* are considered infraspecific forms of the same sp. Of interest are the records of *Coenagrion scitulum*, *Aeshna grandis*, *A. viridis*, *Anax parthenope*, *Ophiogomphus cecilia* and *Cordulegaster bidentata*.
- (12800) BENDA, P. & R. MARSCHNER, 1999. Příspěvek k rozšíření vážky podhorní, *Sympetrum pedemontanum* (Allioni, 1766), na Děčínsku – Contribution to the distribution of *Sympetrum pedemontanum* (Allioni, 1766) in the region of Děčín. *Sb. Okres. Muz. Mostě (Přir.)* 20/21: 35-38. (Czech, with Engl. & Germ. s's). – (Spáva Chránené krajinné oblasti Labské pískovce, Dlouhá jízda 1257, CZ-40501 Děčín-1).  
10 localities are listed, with habitat descriptions and water quality data; – Děčín, Czech Republic.
- (12801) BERGESON, D., 1999. The wild and elusive whoopers. *Int. Crane Found. Bugle* 26(3): 4-5. – (Wood Buffalo Natn. Park, Box 750, Fort Smith, NT, X0E, 0P0, CA).  
Wood Buffalo is Canada's largest park, and the second largest national park in the world, about the size of Switzerland (283 km long, N to S), straddling about 160 km of the border between Alberta and the Northwest Territories. It represents the only remaining breeding grounds of the endangered Whooping Crane, *Grus americana*, in the world. In 1998, there were 49 nesting pairs and approx. 180 cranes in the park. – Here, the Park Warden relates his observations on a ♀ feeding the chick with dragonfly larvae in late May. [Verbatim:] "... the ♀ walked into the bulrush and began probing into the water, fully submerging her head into the pond. On her second probe she caught something in her bill and then walked back to the nest. The ♀ worked the item to the tip of her bill. I could see that it was a dragonfly larva. The ♀ offered the dragonfly to the chick, and the chick made a couple of small stabs at it but could not take it whole. The ♀, using her bill, snipped the dragonfly into pieces, and the chick took a small piece from the ♀'s bill and ate it. The ♀ walked back into the bulrush, probed and brought another dragonfly larva to the chick and broke it into pieces. After 6 different dragonflies, the chick would not take any more. Only then did the ♀ eat one herself. During this time the alert ♂ slowly paced around the nest. [...] the ponds surrounding the nest pond contained small-bodied fish (brook stickleback) and aquatic invertebrates, while the nest pond contained only aquatic invertebrates."
- (12802) BLESSING, J. & C. RANDLER, 1999. Vorkommen der Kleinen Zangenlibelle *Onychogomphus forcipatus* (Linnaeus, 1758) bei Mühlhausen/Enz. *NatSchutz LandschPfl. Baden-Würt.* 73: 271-275. – (First Author: Vaihinger Str. 7, D-71665 Vaihingen-Enzveihingen).  
3 localities (1993, 1996) are stated from the area of Mühlhausen, Baden-Württemberg, SW Germany.
- (12803) BOARD OF EDUCATION OF OSAKA CITY, [Eds], 1999. [How to construct dragonfly ponds]. Bd Educ. Osaka City. 4 pp. (Jap.). – (Publishers: 1-3-20, Nakanoshima, Kita-ku, Osaka, 530-0005, JA).  
A pamphlet, aiming at the popularisation of School Yard Dragonfly Ponds, with an account on and col. portraits of the spp. commonly encountered at the ponds in the Osaka area, provided by K. Inoue.
- (12804) BROCKHAUS, T. & W. KRETZSCHMAR, 1999. Weitere Bearbeitung der Libellen in Sachsen. *Mitt. sächs. Ent.* 45: cover p. 3. – (First Author: An der Morgensonne 5, D-09387 Jahnsdorf).  
A brief progress report on the Saxony Odon. Mapping Project (11000 entries); – Germany.
- (12805) BUCZYŃSKI, P., 1999. [Book review] Jödicke, R., 1997: Die Binsenjungfern und Winterlibellen Europas. *Wiad. Ent.* 18(1): 51-52. (Polish). – (Dept Zool., Univ. M. Curie-Skladowska, Akademicka 19, PO-20-033 Lublin).  
A comprehensive review of the volume listed in OA 11584, with a critical note relative to the information on the distribution in eastern Europe.
- (12806) BUCZYŃSKI, P., 1999. [Kronika/Chronicle] 18. Zjazd Towarzystwa Odonatologów Niemckojezycznych, Münster (Niemcy), 19-21 III 1999. *Wiad. Ent.* 18(2):129-130. (Polish). – (Dept Zool., Univ. M. Curie-Skladowska, Akademicka 19, PO-20-033 Lublin).  
A detailed report on the 18th Symp. of German Odonatol. Soc., Münster, 19-21 March 1999.
- (12807) CARVALHO, A.L., 1999. Odonata. In: C.R.F. Brandão & E.M. Cancellato, [Eds], Invertebrados terrestres, Vol. 5: Biodiversidade do Estado de São Paulo, Brasil: síntese do conhecimento ao final do século XX, pp. 73-79. FAPESP, São Paulo. – (Depto Ent., Museu Nacional, UFRJ, Caixa Postal 68044, BR-

- 21944-970 Rio de Janeiro, RJ).  
A brief general presentation of the order, with a concise outline of the fauna of the state of São Paulo, Brazil (ca 200-300 spp.).
- (12808) CHIPPINDALE, P.T., V.K. DAVE, D.H. WHITMORE & J.V. ROBINSON, 1999. Phylogenetic relationships of North American damselflies of the genus *Ischnura* (Odonata: Zygoptera: Coenagrionidae) based on sequences of three mitochondrial genes. *Molec. Phylogen. Evol.* 11(1): 110-121. — (Dept Biol., Box 19498, Univ. Texas, Arlington, TX 76019, USA). The relationships were investigated using a total of 1205 bp from portions of 3 mitochondrial genes: cytochrome b, cytochrome oxidase II, and 12S ribosomal DNA. Parsimony and neighbour joining analyses reveal a monophyletic group consisting of *I. damula*, *I. demorsa*, *I. perparva*, *I. p. posita*, *I. posita atezka*, *I. verticalis*, and probably *I. denticollis*, likely reflecting a recent radiation in N America. *Ischnura kellicotti*, *I. barberi*, *I. prognata*, *I. hastata*, *I. ramburii*, and *I. capreola* appear to represent much earlier divergences in the group. Many previous hypotheses of relationships among N Am. *Ischnura* spp. are not supported by the molecular-based analyses. However, there is agreement in many respects between the results of the molecular phylogenetic analyses and the morphologically based conclusions of C.H. Kennedy (1919, "The phylogeny of the Zygoptera", PhD Diss., Cornell Univ., Ithaca). Although results of single-gene phylogenetic analyses often differ, there are very few cases in which there is strong support for conflicting relationships using different partitions of the data. Combined analysis of all 3 genes yields trees with stronger support overall than the single-gene analyses, and the combined data trees that result from diverse data treatments are congruent with one another in most respects.
- (12809) [CONIFF, R., translated by V. Novak], 1999. Gospodarji časa — [Master of ages]. *Nedelo, Ljubljana* 5(28): 15. (Slovene).  
Published anonymously, it is based on a text in *Reader's Digest* (June 1999), coming from Author's 1996 book, *Spineless wonders: strange tales from the invertebrate world*, Holt, New York, ISBN 0-8050-4218-0. — For a similar dragonfly article, based on the same book, see OA 10964.
- (12810) CORBET, P.S., 1999. *Dragonflies: behavior and ecology of Odonata*. British edn: Harley Books, Great Horkesley, Colchester, ISBN 0-946589-64-X, price: UK£ 62.50 net; — American edn: Comstock Publishing Associates/Cornell Univ. Press, Ithaca/NY, ISBN 0-8014-2592-1, price: US\$ 95.— net. xxxii+829 pp., frontispiece, 97 col. figs on 17 pls, 40 halftones, 232 line drawings, 191 tabs incl. (26.0x18.4 cm; 1.8 kg), wrappers, with Author's biography, portrait and some Reviewers' statements on the work.  
The splendid, long expected Author's "life work", characterized by one of the manuscript Reviewers, Prof. Dr M.L. May (Rutgers Univ.), himself a distinguished odonatologist, as "unique in the literature on dragonflies and has very few parallels among that on other insects". — The titles of the main chapters are: "Introduction" (pp. 1-8); — "Habitat selection and oviposition" (pp. 9-43); — "The egg and prolarva" (pp. 44-72); — "The larva: respiration and foraging" (pp. 73-123); — "The larva: biotic environment" (pp. 124-178); — "The larva: physical environment" (pp. 179-206); — "Growth, metamorphosis and emergence" (pp. 207-256); — "The adult: general" (pp. 257-338); — "The adult: foraging" (pp. 339-382); — "Spatial displacement by flight" (pp. 383-426); — "Reproductive behavior" (pp. 427-558); — and "Dragonflies and people" (pp. 559-580). The book includes more than 4000 bibliographical entries, a glossary and indexes to authors, taxa and subjects. — This is a "generation work", without a reference to which no serious odonatological research will be henceforth possible. Among the minor shortcomings is a misleading statement on the S.I.O. (p. 563), which did not only "persist(ed) until 1997", but continues its traditional activities without interruption.
- (12811) CORDERO, A., 1999. Forced copulations and female contact guarding at a high male density in a calopterygid damselfly. *J. Insect Behav.* 12(1): 27-37. — (Depto Ecol. & Biol. Animal, Univ. Vigo, EUET Forestal, Campus Universitario, ES-36005 Pontevedra).  
Territorial Calopteryx ♂♂ court ♀♀ on territories that contain oviposition substrates. Nonterritorial ♂♂ try to mate without courtship but very rarely obtain matings because ♀♀ fail to bring up their abdomen to engage genitalia. Here, the results of observations made on a very high-density population of *C. haemorrhoidalis* in central Italy are reported. Mating activity was intense, and during 40 h of observation in an 8-m section of the stream, 209 matings were recorded (max 17 matings h<sup>-1</sup>). ♂♂ were continuously disturbing ovipositing ♀♀ and tried to achieve tandem



- forcibly. Of 84 cases, ♂♂ achieved forced tandem in 53, and 49 ended with copulation. Forced tandems were the most common method to obtain a mating in this population (55% of 65 matings). ♂♂ guarded ♀♀ after forced or courtship copulations and, in some cases, maintained physical contact with their mate, by perching on her wings. Confusion was common and ♂♂ guarded nonmates frequently, which suggests that they were unable to recognize their mate individually.
- (12812) COSTA, J.M. & T.C. DOS SANTOS, 1999. Odonata da Marambaia (ilha e restinga), Rio de Janeiro, Brasil: resultado das expedições do Museu Nacional pelo convênio entre a Universidade Federal Rural do Rio de Janeiro e a Marinha do Brasil, com a descrição da larva de Heteragrion consors Hagen in Selys, 1862 (Zygoptera: Megapodagrionidae). *Contrib. Hist. nat. Brasil (Zool.)* 5: 1-7. (Port., with Engl. s.). — (First Author: Depto Ent., Museu Nac., UFRJ, Quinta da Boa Vista, BR-20940-040 Rio De Janeiro, RJ).  
A commented checklist of 53 spp. of Marambaia is provided, and *H. consors* larva is described, illustrated and compared with *H. aurantiacum* Sel.
- (12813) D'ANTONIO, C., 1999. Nuovi reperti odonatologici della provincia di Bergamo, Lombardia, Italia settentrionale. (Odonata). *Opusc. zool. flumin.* 173: 11-15. (With Engl. s.). — (Via A. Falcone 386/b, I-80127 Napoli).  
So far only 4 spp. were known from the province, Lombardy. Here, an annotated provincial checklist of 30 spp. is presented. The record of *Coenagrion pulchellum mediterraneum* is extending the northern limit of the ssp. range.
- (12814) D'ANTONIO, C., 1999. Odonati della provincia di Brescia, Lombardia, Italia settentrionale. (Odonata). *Opusc. zool. flumin.* 173: 17-32. (With Engl. s.). — (Via A. Falcone 386/b, I-80127 Napoli).  
An annotated checklist is presented of the 56 spp. hitherto known to occur in the province, Lombardy, northern Italy, based on literature and on previously unpublished material, brought together in 1997 from 46 localities. A biogeographical analysis, sensu A.V. Vigna Taglianti et al. (1992, *Biogeographia* N.S. 16: 159-179), shows a high percentage (78.5%) of spp. with "broad holarctic distribution" (whether or not in the Palaearctic only), which is higher than the value established for Lombardy (74.2%), and similar to those for Friuli Venezia Giulia (79.7%), Veneto (78.7%), and Trentino Alto Adige (77.0%). Also provided are concise comments on the occurrence of 15 spp., considered of particular regional interest. The complete regional bibliography is appended.
- (12815) D'ANTONIO, C., 1999. Odonati italiani della collezione entomologica del Museo Civico di Scienze Naturali di Brescia. (Odonata). *Opusc. zool. flumin.* 173: 1-10. (With Engl. s.). — (Via A. Falcone 386/b, I-80127 Napoli).  
53 spp. are listed along with the precise locality data and collection dates. *Aeshna juncea* is recorded from the province of Brescia for the first time since 1879 (cf. R. Pirota, 1879, *Annali Mus. civ. Stor. nat Genova* 14: 401-489). *Ophiogomphus cecilia* is new for the fauna of Brescia, *Somatochlora metallica* is new for that of the province of Mantova, and 20 spp. are added to the province of Cremona list; — northern Italy.
- (12816) DANTART, J. & R. MARTIN, 1999. *Somatochlora metallica* (Van der Linden, 1825) (Odonata: Corduliidae) y *Leucorrhinia pectoralis* (Charpentier, 1825) (Odonata: Libellulidae), dos nuevas especies de libélulas para la península ibérica. *Boln Asoc. esp. Ent.* 23(1/2): 147. (With Engl. title). — (First Author: Josep Tarradellas 40,7', 4a, ES-08029 Barcelona).  
Records from Lérida, alt. 2120 m, Spain.
- (12817) DIJKSTRA, K.-D.B., 1999. Libellen in Berkheide en De Klip 1998. *Holland's Duinen* 34: 19-41. (Dutch). — (Oude Rijnsburgerweg 38, NL-2342 BC Oegstgeest).  
The continuation of the survey, as reported in *OA* 12017. — (A printing error occurs in the title of the first paper; — corr.: "Berkheide").
- (12818) DINGEMANSE, N. & A. Vliegenthart, 1999. Ben ik klein genoeg om te paren? Verschillen in achterlijfs lengten bij de Gewone pantserjuffer (*Lestes sponsa*) — [Am I small enough to mate? Differences in abdominal lengths of *Lestes sponsa*]. *Amoeba, Amst.* 73(1): 28-31. (Dutch). — (First Author: Prins Hendrikweg 19, NL-6721 AD Bennekom).  
300 adult ♂ and 144 adult ♀ were studied from 4 localities in the Netherlands and 1 in Belgium. The MANOVA program was used in statistic treatment of abdominal and wing measurements. It is shown that: (1) the individuals with longer abdomens have also longer wings, though the ratio between the 2 values is smaller than in the small individuals; — (2) on average,

- ♀♀ are smaller than the ♂♂; — (3) there is a clear difference in the average size between the individuals of different localities, which is probably conditioned by the available food; — (4) often the mated individuals (taken in tandem or in copula) are smaller than the unmated ones; — and (5) big insects tend to mate with the big ones, small individuals select small partners. The results are briefly discussed.
- (12819) DONNELLY, T.W., 1999. *The dragonflies and damselflies of New York*. Prepared for the 1999 Int. Congr. Odonatol. & 1st Symp. WDA, Hamilton/NY. 39 pp. + 3 pp. Append. — (2091 Partridge Lane, Binghamton, NY 13906, USA).  
A revised edn of the monograph listed in OA 8396. The 2 Appendices are titled: "Enallagma cyathigerum and vemale", and "Sympetrum rubicundulum and internum, hybrids between internum and obtrusum".
- (12820) EWERS, M., 1999. *Die Libellen zwischen Weser und Ems*. Isensee Verlag, Oldenburg. 112 pp., 102 col. phot. & distr. maps incl. (24.0x17.0 cm), softcover. ISBN 3-89598-588-0. — Price: DEM 18.90 net. — (Available from: Staatl. Mus. Naturk. u. Vorges. Damm 38-44, D-26135 Oldenburg).  
A regional monograph on the odon. fauna (61 spp.) between the Weser and the Ems, Germany. Each sp. is briefly described, with annotations on habitat requirements, regional distribution and status. Also provided are field portraits, regional distribution maps, and a comprehensive bibliography.
- (12821) *FIELD GUIDE to dragonflies and field trip sites* [of the] 1999 International Congress of Odonatology and First Symposium of the Worldwide Dragonfly Association. Colgate Univ., Hamilton. 20 pp. Compiled by J. Rith-Najarian. — (Author: River's Edge Geographics, P.O. Box 453, Bemidji, MN 56601, USA).  
Includes information on the village of Hamilton, on the Pre-Congress Tour of Skaneateles Lake, on various short field trips, and on the Post-Congress Tours to the Adirondack Mts and to Minnesota. Also provided are a checklist of the Odon. of central and northern New York state, and a "Photographic guide to common dragonflies of the eastern United States", by J. Weber. — See also OA 12784.
- (12822) FORBES, M.R.[L.], K.E. MUMA & B.P. SMITH, 1999. Parasitism of *Sympetrum* dragonflies by *Arrenurus planus* mites: maintenance of resistance particular to one species. *Int. J. Parasitol.* 29(7): 991-999. — (First Author: Dept Biol., Carleton Univ., 1125 Colonel By Dr., Ottawa, ON, K1S 5B6, CA).  
Using field surveys and histological methods, it is shown that *S. internum* has an effective resistance, not seen previously in other odon., to a mite parasite, *A. planus*. The latter is a generalist parasite, known to effectively engorge on other odon. spp. It is argued that selection is likely weak, favouring counter adaptations of *A. planus* to *S. internum*, in part because other host spp. are available. It is further argued that this pattern is possibly linked to the fact that the mode of resistance is relatively novel, and because *S. internum* is rare compared to another host sp., *S. obtrusum* at the study site. Although resistance of *S. internum* is quite effective against *A. planus*, *A. planus* larvae still attach to this sp., but less often than they attach to *S. obtrusum*. Attachment to unsuitable hosts may reflect constraints operating on *A. planus* larvae during host discovery. Such factors influencing the evolution of resistance, when several potential host spp. exist, have not received much attention.
- (12823) FREY, J., 1999. Practical aspects of biotope mapping in cities: methods, problems and solutions. An example of Mainz, Germany. *Deinsea* 5: 41-56. (With Dutch s.). — (FÖJ Rheinland-Pfalz, Postfach 1951, D-55009 Mainz).  
A synopsis of biotope mapping schemes in Germany, and a concise account of some features of biotope mapping in Mainz are provided. In the Appendix, 9 odon. spp. are listed for the city of Mainz.
- (12824) HANCOCK, E.G., 1999. Scottish insect records for 1997. *Glasgow Nat.* 23(4): 55-58. — (Zool. Mus., Graham Kerr Bldg, Univ. Glasgow, Glasgow, G12 8QQ, UK).  
*Orthetrum coerulescens* (Turraman Loch, Colonsay; 4-VI-1997) is the sole odon. record listed.
- (12825) HANSHIN CITY BIOTOPE FORUM, [Eds], 1999. *Good practices of school yard biotope*. Tombo Publishing, Osaka. 120 pp., 8 col. pls excl. (25.6x18.3 cm), softcover. ISBN 4-88716-141-7. — Price: ¥ 1200.— net. (Jap., with Engl. title). — (Publishers: 8-16, Karahori-cho, Tennoji-ku, Osaka, 543-0012, JA).  
Many primary and some junior and senior high schools in Japan have a s.c. "School Yard Biotope". 25 of these are here described, and construction details and utilization objectives are outlined. In the framework of most of them, there is also a "Dragonfly Pond".

Various problems relative to these Biotopes were discussed in a round-table talk, the record of which is here also included.

- (12826) HARDERSEN, S., S.D. WRATTEN & C.M. FRAMPTON, 1999. Does carbaryl increase fluctuating asymmetry in damselflies under field conditions? A mesocosm experiment with *Xanthocnemis zealandica* (Odonata: Zygoptera). *J. appl. Ecol.* 36(4): 534-543. (Ecol. & Ent. Gr., Div. Plant Soil & Ecol. Sci., Lincoln Univ., P.O. Box 84, Canterbury, NZ).  
Previous laboratory experiments have shown that the insecticide carbaryl reduces emergence success and increases fluctuating asymmetry in cell patterns of damselfly wings. These effects were validated using mesocosms. Twenty artificial ponds, each containing *X. zealandica*, were exposed to three replicated (n=5) concentrations of carbaryl contamination plus controls. Emergence success, level of fluctuating asymmetry in meristic and metric traits of the wings and average size of the damselflies were measured. – The degradation of carbaryl was relatively constant for the first 5 weeks but later increased considerably, probably because of enhanced biodegradation. – Carbaryl at 100 p.p.b. (nominal concentration) reduced emergence success 10 days after application, whereas carbaryl at 10 p.p.b. and 1 p.p.b. had no effect. – To investigate how the level of fluctuating asymmetry and size were affected by carbaryl, damselflies from ponds with the highest concentrations where emergence success was not affected (10 p.p.b.) were analysed over four time periods. Fluctuating asymmetry of the wings increased during the season but was not affected by carbaryl at 10 p.p.b. – Size, measured as average length of the front wings, was affected by date of emergence but not by exposure to carbaryl at 10 p.p.b. – Three main reasons for the absence of increased levels of fluctuating asymmetry as a result of carbaryl exposure are suggested.
- (12827) HARTHUN, M., 1999. Funktionalität und Wiederherstellung von Lebensräumen gemeinschaftlicher Bedeutung (GGB) am Beispiel von Auen in Hessen. FFH-Entwicklungsgebiete als Voraussetzung für ein nachhaltiges Schutzgebietsystem Natura 2000 der EU. *Natur Landschaft* 74(7/8): 317-322. (With Engl. s.). – (Naturschutzbund Deutschland, LV Hessen, Postfach 2104, D-35531 Wetzlar).  
Functions and restoration prospects of Sites of Community Importance (SCIs) are discussed on the example of river systems in the German state of Hesse, and with the objective of the establishment of a sustainable network of protected areas in the European Union. The importance of climatically favourable river valleys for the odon. fauna is emphasized, and the recent observations on *Cercion lindenii*, *Gomphus pulchellus* and *G. vulgatissimus* are pointed out.
- (12828) HIRVONEN, H., 1999. Shifts in foraging tactics of larval damselflies: effects of prey density. *Oikos* 86(3): 443-452. – (Integrate Ecol. Unit, Div. Popul. Biol., Dept Ecol. & Syst., P.O. Box 17, FIN-00014 University of Helsinki).  
Search activity and attack tactics of *Lestes sponsa* larvae, feeding on *Daphnia magna*, were studied at 9 densities, ranging from 2 to 640 per 1.5 l. Search activity increased from low to intermediate densities (40 *Daphnia*) and declined again at higher prey densities, as has been predicted by theories on optimal tactics for energy maximising foragers. Similarly, frequency of pursuit attacks first increased and then decreased as prey density increased. Frequency of ambush attacks increased with a decelerating rate with prey availability. Thus the proportion of pursuit attacks decreased linearly as prey density increased. Profitability of pursuing increased faster than ambush profitability at low prey densities and remained higher up to 40 prey. At higher prey densities the profitabilities reversed. Relative profitability of pursuits proportioned to prey density peaked with 5 *Daphnia*. At other prey densities than 5, frequency of pursuit attacks decreased towards the end of the trials. This change in foraging mode accounted for accelerating proportional prey mortality to an intermediate *D. magna* density and thus the potential for a dampening effect on the prey population. Adjusting foraging tactics in response to prey availability may be adaptive for the predator, and may also contribute to density dependence in the predator-prey relationship through effects on functional response.
- (12829) HOLLOWAY, L.G., 1999. *The dragonflies and damselflies of Pagharn Harbour Local Nature Reserve*. Holloway, Bognor Regis. 44 pp., 16 col. pls excl. (21.0x14.8 cm), softcover. ISBN none. – Price: UK £ 9.50 net. – (Orders to the Author/Publisher: Wigeon Cottage, 30 Fernhurst Gardens, Aldwick, Bognor Regis, West Sussex, PO21 4AZ, UK).  
The Author has been studying natural history since his boyhood. Until his retirement, some yr ago, his work during the last 30 yr or so has involved organizing parties to look at birds, mammals, etc., in various parts

- of the world. — This is his first odonatological publication. It is prepared with much skill and knowledge, bringing all the information required by a dragonfly watcher visiting this LNR in West Sussex, UK. With its only 15 known spp., the fauna of the Reserve (ca 1600 acres of tidal mud-flats and saltings, shingle beaches, lagoons, farmland, old hedgerows and copses, and slow-flowing streams) is not “spectacular”, but quite a few of the related field observations will be of interest to a professional odonatologist as well, particularly those concerning e.g. the tidal water environment. The observations are supplemented with those at 4 garden ponds at the Author's Aldwick home, ca 2 mi from the Reserve. Refreshing and informative are numerous and exhaustive verbatim quotations from field diaries. — This is certainly a valuable addition to the United Kingdom homestead odonatol. literature.
- (12830) HRYCIUK, M., 1999 [Dragonfly haiku]. *Letni Časi* 3(4): 4. — (600 Broadway, F-20, Amityville, NY 11701, USA).  
“That cracle / a dragonfly / lit on a pebble”.
- (12831) JEŽ, B., 1999. Čas kačjih pastirjev — [Dragonfly season]. *Delo, Ljubljana* 41(175): 3; issue of 31 July. (Slovene). — (c/o Ed. Office, Dunajska 5, P.O. Box 29, SI-1509 Ljubljana).  
This is a political article in the national leading daily. In the title, the expression, “dragonfly season”, is used for the first time in Slovenian to denote the (summer) off-season in political life. — In a political interview (A. Stres/B. Štefanič), published in the Slovene weekly, *Družina, Ljubljana* 48(29): 9, on 18 July 1999, the figurative expression, “interest in dragonfly sexual life”, has been used as a phrase denoting a subject that is of no interest. For a reference to the latter see also *Mladina, Ljubljana* 1999(29): 11. — These are recent examples of the introduction of a dragonfly metaphor into a figurative, modern language.
- (12832) KALKMAN, V. & N. DINGEMANSE, 1999. De Metaalglanslibel: schaars of onderschat? — [Somatochlora metallica: scarce or underestimated?]. *Amoeba, Amst.* 73(3): 10-13. (Dutch). — (First Author: Oude Rijnsburgerweg 38, NL-2342 BC Oegstgeest).  
In the Netherlands, in more than 95% of sightings of this sp. it seems that only 1-3 individuals are involved. A mark-recapture study, however, indicates that the ♂♂ hold large territories, but only during a short time, whereafter they are replaced by other ♂♂, sojourning temporarily in the nearby woods. This situation is similar to that known in *Aeshna cyanea*, therefore the local populations are significantly larger than it would seem from the simultaneous presence of only a few ♂♂ at the watersite.
- (12833) KANO, K. & Y. HIROSE, 1999. [Orthetrum triangulare melania: in cold districts associated with hot-spring localities]. *Gekkan-Mushi* 341: 16-17. (Jap.). — (First Author: No. 601, 19-17, Koishidawa 5-chome, Bunkyo-ku, Tokyo, 112-0002, JA).  
At 5 localities in central and eastern Hokkaido, Japan the sp. is restricted to the hot-spring areas, its larvae occur in warm streams. Adult *Sympetrum pedemontanum* elatum and *Anotogaster sieboldii* were also observed at such streams; they seem to depend on temperature and are acidity-tolerant.
- (12834) [KIAUTA, B.] BEDJANIČ, M., 1999. Boštjan Kiauta — Boštjan Kiauta, an internationally known odonatologist. *Proteus, Ljubljana* 62(1): 15, 47. (Slovene, with Engl. title in contents table). — (Author: Fram 117/A, SI-2313 Fram).  
A concise outline of professional life and a brief evaluation of work, with a portrait by R. Müller (St Gallen, Switzerland).
- (12835) KIAUTA, B. & M. KIAUTA, 1999. A note on dragonfly response during the 93% solar eclipse of 11 August 1999 in the Netherlands (Odonata). *Opusc. zool. flumin.* 172: 1-6. — (P.O. Box 256, NL-3720 AG Bilthoven).  
An analysis of odon. behaviour at a locality nr Utrecht, combined with the available evidence from India and France, seems to indicate it is the rapid reduction of light intensity during a solar eclipse rather than a relatively minor drop in the ambient temperature that triggers the behavioural response. The latter is similar to the behaviour preceding oncoming heavy weather.
- (12836) KISHI, K., 1999. [Anax guttatus collected in numbers in Kanagawa prefecture, Japan]. *Gekkan-Mushi* 342: 8-10. (Jap.). — (Mistral Shonan A-101, 488-1, Ishikawa, Fujisawa, Kanagawa, 252-0815, JA).  
Between 19 Sept. and 9 Nov. 1998, more than 80 individuals were observed (peak: late Sept.-early Oct.): at small and large ponds and at rivers. At a pond in Chigasaki, an exuvia was collected on 20 Nov. Patrolling flights, chasing after *A. parthenope julius*, and oviposition was also observed.
- (12837) KOMAT, A., 1999. Življenje reke in reka

- Življenja – [The life of the river and the river of life].  
*In*: A. Komat & I. Geister, [Eds], *Dragonja*, pp. 55-67,  
 Capris, Koper, ISBN 961-90109-5-7. (Slovene). –  
 (c/o I. Geister, Kocjančiči 18, SI-6276 Pobjegi).  
 Includes a beautiful belletristic description of an  
 incidental encounter with a dragonfly (pp. 55-56). –  
 (In Slovenian belles lettres, dragonfly motifs and texts  
 are generally very rare.)
- (12838) KRAWUTSCHKE, A., 1999. Zur Ökologie  
 und Biologie ausgewählter Aeshniden-Arten (Odonata:  
 Anisoptera) im Naturpark Westhavelland. *DiplArb.*  
*Biol., Zool. Inst. & Mus., Univ. Hamburg.* 120 pp. +  
 28 pp. tabs & figs. – (Timm-Kröger-Weg 26 a, D-  
 -22926 Ahrensburg).  
*Brachytron pratense*, *Anaciaeschna isosceles*, *Aeshna*  
*grandis*, *A. mixta*, *A. viridis*, *Anax imperator* and *A.*  
*parthenope* were studied in Nature Park Westhavelland,  
 Brandenburg, Germany. Considered are the aspects of  
 adult habitat preference, larval development, emer-  
 gence, competition/coexistence, and conservation.
- (12839) KROTZER, S.R. & M.J. KROTZER, 1999.  
 Dragonflies and damselflies (Odonata) in the National  
 Forests in Alabama. *Ent. News* 110(3): 153-161. –  
 (Second Author: Dept Nat. Sci., Stillman Coll., P.O.  
 Box 1430, Tuscaloosa, AL 35401, USA).  
 Odon. surveys were conducted on National Forest  
 lands between 1994-1997. 124 spp. were collected,  
 and 70 new county records were documented. An  
 annotated checklist is presented, and it is emphasized  
 that National Forest lands in Alabama may serve as a  
 refugium for spp. with specialized larval habitat re-  
 quirements or that are sensitive to habitat disturbances.
- (12840) *LIBELLENNACHRICHTEN*. Mitteilungsblatt  
 der Gesellschaft deutschsprachiger Odonatologen,  
 GdO (ISSN 1437-5621), No. 2 (15 Sept. 1999). –  
 (c/o Mrs U. Krüner, Gelderner Str. 39, D-41189 Mön-  
 chengladbach).  
 On 20 pp., organised under the traditional headings,  
 the following are some of the major items: Report on  
 1999 Plenary Business Meeting, incl. the 1998 Balance  
 Account of the Society, Modifications of the Constitu-  
 tion, various book reviews, and a brief obituary for Dr  
 Paul Münchberg (16-IX-1905/23-VII-1999). Of  
 interest is R. Jödicke's article on the correct spelling  
 of [*Anaciaeschna*] *isosceles* vs *isocoles* (pp. 15-16).
- (12841) *LIBELLULA* (SUPPL.), Vol. 2: W. Lopau, [Ed.],  
*Studien zur Libellenfauna Griechenlands*, 1 (131 pp.),  
 Aug. 1999. ISSN 0723-6514.  
 See OA 12842.
- (12842) LOPAU, W., [Ed.], 1999. *Studien zur Libellen-  
 fauna Griechenlands*, 1. Ges. Deutschsprachiger  
 Odonatol., Mönchengladbach. 131 pp. ISBN none.  
 [*Libellula* (Suppl.) 2]. – Price: DEM 25.— net. (With  
 Engl. s's). – (Orders to: Mrs U. Krüner, Gelderner  
 Str. 39, D-41189 Mönchengladbach).  
*Lopau, W.*: Vorwort (p. 1); – *Arlt, J. & J. Ruddek*: Be-  
 stimmunsschlüssel für Exuvien der Libellen Griechen-  
 lands (pp. 3-15); – *Hecker, F.*: Beobachtungen zur  
 Lebensweise von *Caliaeschna microstigma* (Schnei-  
 der) an einem Bach in Nordost-Griechenland (Aniso-  
 ptera: Aeshnidae) (pp. 17-31); – *Hoess, R., H.-U.*  
*Kohler, H. Berger & G. Bieri*: Libellenbeobachtungen  
 auf Rhodos, Griechenland, 1990 bis 1993 (pp. 33-40);  
 – *Kohl, S.*: Libellenbeobachtungen auf der  
 griechischen Insel Samos (pp. 41-42); – *Lopau, W.*:  
 Die Libellenfauna der griechischen Inseln Thassos,  
 Samothraki und Limnos (pp. 43-61); – Bemerkens-  
 werte Libellenfunde aus Griechenland (pp. 63-66); –  
 Die Libellenfauna der Insel Evia (Euböa), Griechen-  
 land (pp. 67-76); – *Van Pelt, G.O.*: On dragonflies  
 from Greece in the RMNH collection, Leiden, the  
 Netherlands (pp. 77-90); – *Lopau, W.*: Bisher unver-  
 öffentlichte Beobachtungen aus Griechenland (pp. 91-  
 -131).
- (12843) MAIBACH, A. & C. MEIER, 1999.  
 Groupement des odonatologues de Suisse –  
 Vereinigung der schweizerischen Libellenkundler: 11.  
 Libellen-Symposium in Neuenburg – 11<sup>e</sup> Symposium  
 des odonatologues de Suisse, Neuchâtel, 21.11.1998.  
*Nouvelles Cent. Suisse Cartogr. Faune* 17: 34-38. –  
 (First Author: La Croix, Rte de Moudon 11, CH-1610  
 Oron-la-Ville).  
 [Abstracts of papers:] *Oertli, B.*: Altitude et diversité  
 des odonates (pp. 34-35); – *Gander, A.*: Suivi des  
 populations des larves de libellules dans un décapage  
 expérimental de roselière inondée de la Grande  
 Carigaie (p. 35); – *Pierallini, R.*: Le libellule delle  
 Bolle di Magadino: aggiornamenti sull'inventario  
 degli odonati di Ticino (pp. 35-36); – *Kohl, S.*:  
 Reisebericht vom 3. Alp-adriatischen Libellen-  
 symposium in Kroatien (p. 36); – *Maibach, A.*: Suivi  
 de la colonisation d'un étang amortisseur de crues pour  
 les libellules 1993-1998, étang de Suchy (VD) (p. 36);  
 – *Knauss, P.*: Beobachtungen zur Populations-  
 ökologie von *Somatochlora alpestris* (p. 37); – *Flöss,*  
*I.*: Struktur- und Raumnutzung von *Somatochlora*

- flavomaculata in einer zürcherischen Moorlandschaft (p. 37); – *Wildermuth, H.*: Die Paarung von *Soma-tochloa alpestris* (p. 37); – *Vonwil, G.*: Überwachung von Libellenbeständen: Möglichkeiten und Grenzen (pp. 37-38); – *Grütter, E.*: Einige Dias zur Eiablage von *Coenagrion mercuriale* (p. 38).
- (12844) *MARTINIA*. Revue scientifique de la Société Française d'Odonatologie, Vol. 15, No. 3 (Sept. 1999), No. 4 (Dec. 1999). – (c/o J.-L. Dommanget, 7 rue Lamartine, F-78390 Bois-d'Arcy).  
[No. 3:] *Jourde, P., O. Allenou, M. Caupenne & J.-M. Thirion*: Inventaire des odonates de Charente-Maritime (pp. 71-78); – *Dommanget, J.-L. & T. Williamson*: Réactions de quelques odonates en forêt de Rambouillet lors de l'éclipse de soleil du 11 août 1999 (département des Yvelines) (pp. 79-82); – *Hubert, S.*: Présence de *Gomphus graslinii* (Rambour, 1842) dans le département de la Sarthe (pp. 79-80); – *Williamson, T.*: *Ophiogomphus cecilia* (Geoffroy in Fourcroy, 1785) et *Gomphus flavipes* (Charpentier, 1825): espèces nouvelles pour la Loire-Atlantique (Odonata, Anisoptera: Gomphidae) (pp. 85-87); – *Dortel, F. & F. Branger*: Nouvelles observations d'*Epietheca bimaculata* (Charpentier, 1825) dans le département de l'Indre (p. 88); – *Dommanget, J.-L.*: "3<sup>e</sup> Séminar: Inventaire et cartographie des invertébrés comme contribution à la gestion des milieux naturels français", Besançon, juillet 1999: aspects généraux et odonotologiques (pp. 89-98); – *d'Aguilar, J.*: Les descriptions originales des odonates d'Europe, 3: Fourcroy, Antoine François de (1755-1809) (pp. 99-103); – *Dortel, F.*: Etude odonotologique et floristique de la vallée de la Chézine (Nantes, St Herblain, département de la Loire-Atlantique) (p. 104). – [No. 4:] *Dusoulier, F., J.-M. Paillisson & C. Bernier*: Etude faunistique des odonates du lac de Grand-Lieu (département de Loire-Atlantique) (pp. 107-120); – *Samraoui, B. & R. Jödicke*: Mise au point concernant l'article "Les odonates zygoptères de l'oued de la Meskiana (Algérie): premier bilan des observations" (*Martinia* 15/1: 22) (pp. 121-135); – *Laurent, S.*: Discussion sur la variabilité morphométrique de *Cercion lindenii* (Odonata, Coenagrionidae) (pp. 125-130); – *Chalmel, R. & J.-L. Dommanget*: Rubrique bibliographique (pp. 131-135); – *Heidemann, H.*: Analyses d'ouvrages (pp. 136-144).
- (12845) *MATSUKI, K., S. FUJITA et al.*, 1999. [Dragonflies of Amakusa, Kumamoto prefecture]. *Trans. Kyushu ent. Soc.* 17: 1-35. (Jap., with taxonomic nomenclature). – (First Author: 1575-14, Hasama-cho 3-chome, Funabashi, Chiba, 274-0822, JA). An annotated and commented list of the 72 spp. known to occur in Amakusa Isls, Kumamoto pref., Japan.
- (12846) *MATSUKI, K. & S. OHAMA*, 1999. [On the number of dorsal and lateral spines in *Gomphus postocularis* larvae from Lake Shinji, Shimane prefecture]. *Sukashiba* 47: 23-26. (Jap.). – (First Author: 1575-14, Hasama-cho 3-chome, Funabashi, Chiba, 274-0822, JA).  
The dorsal and lateral spines on segm. 6-9 were examined in 204 exuviae, collected on 23-IV-1998. These are similar to those from Uji city, but differ from the specimens from Ibaraki and Tokyo prefectures.
- (12847) *MATSUKI, K. & S. SOTA*, 1999. [On the number of dorsal and lateral spines in *Gomphus postocularis* larvae from Yonago city, Tottori prefecture]. *Sukashiba* 47: 27-28. (Jap.). – (First Author: 1575-14, Hasama-cho 3-chome, Funabashi, Chiba, 274-0822, JA).  
The dorsal and lateral spines on segm. 6-9 were examined in 15 exuviae, collected on 1-V-1993 and 25-IV-1998. These are similar to those from Uji city, but differ from the specimens from Ibaraki and Tokyo prefectures.
- (12848) *NIEUWSBRIEF VAN DE NEDERLANDSE VERENIGING VOOR LIBELLENSTUDIE*, Vol. 3, No. 3 (Oct. 1999). (Dutch). – (c/o W.J.A. Hoeffnagel, Krekmeent 72, NL-1218 ED Hilversum).  
[Scientific notes:] *Edelaar, P. & H. Niesen*: *Coenagrion lunulatum* in the Noord-Holland dunes (pp. 3-4); – *Hospers, M. & A. Hospers*: *Gomphus vulgatissimus* along the Overijsselse Vecht R. again (pp. 4-5); – *Achterkamp, G.*: Population assessment of *Sympetrum pedemontanum* in de Maat, Belgium (pp. 6-7); – *Vos, R. & D. van Werven*: *Oxygastra curtisii* on the Luxembourg/Germany border (pp. 7-8); – *Botschuyver, A.*: Increasing *Leucorrhinia* records from the Holland dunes (p. 10).
- (12849) *ODONATOLOGICAL LIBRARY NEWS*, No. 24 (4 Apr. 1999). 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).  
Lists 265 bibliographic entries (1953-1999).
- (12850) *PAULSON, D.[R.]*, 1999. *Dragonflies of*

Washington. Seattle Audubon Soc., Seattle. 32 pp. ISBN 0-914516-15-9. — (Author: Slater Mus. Nat. Hist., Univ. Puget Sound, 1500 North Warner, Tacoma, WA 98416-0360, USA).

A concise and beautifully produced introduction guide to the Washington odon., with col. portraits of most spp.

- (12851) PAULSON, D.R. & S.W. DUNKLE, 1999. A checklist of North American Odonata, including English name, etymology, type locality, and distribution. *Occ. Pap. Slater Mus. nat. Hist.* 56: 1-86. — (First Author: Slater Mus. Nat. Hist., Univ. Puget Sound, 1500 North Warner, Tacoma, WA 98416-0360, USA).

The checklist includes all 435 spp. of N Amer. Odon. considered valid at this time. For each sp. the original citation, Engl. name, type locality, etymology of both taxonomic and Engl. names, and approximate distribution are given. Literature citations for original descriptions of all spp. are provided in the annotated bibliography. — This is a handy and most useful review of the regional fauna.

- (12852) PERALTA, F.C., 1999. [Dragonfly haiku]. *Letni Časi* 3(4): 6. — (18 Tanguile St., Phase VI, Pleasant Hill Subdivision, San Jose del Monte 3023, Bulacan, The Philippines).

"A morning in May. / Only the swishing / Of dragonflies can be heard."

- (12853) PLUCINSKI, A., 1999. [Die Zweigestreifte Quelljungfer]. *Beitr. Vogel-Insektenwelt Ostfrieslands* 131: 16. — (c/o K. Rettig, Danziger Str. 11, D-26725 Emden).

A photographic record of *Cordulegaster boltonii*: ♂, Goslar, Germany; 13-VIII-1997.

- (12854) POPOVA, O.N., 1999. *Strekozy roda Sympetrum* — [Dragonflies of the genus *Sympetrum*]. Avtoref. Diss. Kand. Biol. Nauk, Inst. Anim. Syst. Ecol., Russ. Acad. Sci., Novosibirsk. 22 pp. (Russ.). — (Inst. Anim. Syst. Ecol., Russ. Acad. Sci., Ul. Frunze 11, RUS-630091 Novosibirsk).

This is the published summary of the dissertation. — The genus is considered uniform throughout its range, no infrageneric taxa/species-groups could be discerned. 60 spp. and 22 sspp. are recognized; the infraspecific status of *S. croceolum fuscostrum* Belyshev, *S. pedemontanum intermedium* Belyshev, *S. p. kurentzovi* Belyshev, and *S. striolatum*

*doshidordzii* Belyshev is rejected. The primary centre of the origin of the genus is suggested in eastern (subholarctic) Asia. The large-range spp. tend to migrate and do not require particular environmental conditions, those with smaller ranges are often specialised to the montane or arid habitats. Many spp. quickly colonize the appropriate habitats. Throughout the northern hemisphere, *Sympetrum* spp. often make up the bulk of the odon. larval biomass (up to 50 g/m<sup>2</sup>, or 150.000 individuals, i.e. 15 kg/ha). Due to anthropogenic impact, ca 20% of the locally restricted spp. are threatened. — This is an excellent study, with numerous, far-reaching conclusions. It is hoped, therefore, the complete text will soon become available in a publication.

- (12855) REHLI, V. & F. SCHLEGEL, 1999. Der Silbergiessen fliesst wieder! Erfolgreiches Pilotprojekt in der Melser Rheinau. *Terra plana* 1999(3): 31-37. — (First Author: Bahnhofstr. 37, CH-8880 Walenstadt).

In Switzerland and in southern Germany, the oxbow backwaters are called "Giessen". Here, the hydrology and the flora and fauna of those in the Melser Rheinau, Sarganserland, canton St Gallen, E Switzerland are described. *Calopteryx splendens* is stated as a characteristic sp. of this type of habitats.

- (12856) REINHARDT, R., 1999. Landesweit repräsentative, ortsgenaue Erfassung ausgewählter, naturschutzrelevanter Insektengruppen sowie Benennung von Gebieten mit besonderer Bedeutung für die Entomofauna in Sachsen. Landesweite, ortsgetraue Erfassung der Libellen und Heuschrecken im TK 25(N)-Raster. *Mitt. sächs. Ent.* 45: 2-9. — (Burgstädter Str. 80 a, D-09684 Mittweida).

A commented list of 67 spp., 7 of which are non-autochthonous or extinct in Saxony, Germany. *Sympecma paedisca*, *Gomphus flavipes*, *Hemianax ephippiger* and *Crocothemis erythraea* were recorded in the state in the 1990s for the first time, while *Aeshna affinis* and *Sympetrum fonscolombei* have also reappeared then.

- (12857) RETTIG, K., 1999. Schlupfvorgänge der Blaugrünen Mosaikjungfer (*Aeshna cyanea*) im Zeitraum 1983-1999 in Gartenteichen unseres Hausgartens in Emden. *Beitr. Vogel-Insektenwelt Ostfrieslands* 134: 10-12. — (Danziger Str. 11, D-26725 Emden).

A graph is given of 571 emergences of *Aeshna cyanea*

- in Author's garden ponds (1983-1999), Emden, Ostfriesland, Germany, which have occurred between the 2nd decade of June (5x) and the 3rd decade of Aug. (7x), with the peak in the 3rd decade of July (169x). Also provided is a list of 20 plant spp. that have served as support. The numbers of exuviae per plant sp. are stated.
- (12858) [RETTIG, K.] MILKERT, A., 1999. Ein Stück Naturschutz im eigenen Garten. *Emder Ztg* 29(190): 8; issue of 17 Aug.; — reprinted in: *Beitr. Vogel-Insektenwelt Ostfrieslands* 135: 24-25. — (c/o K. Rettig, Danziger Str. 11, D-26725 Emden).  
A local daily's interview with the naturalist and dragonfly watcher, Klaus Rettig, mainly on his backyard dragonfly pond. A portrait is included.
- (12859) SHIEH, S.-H. & P.-S. YANG, 1999. Colonization patterns of aquatic insects on artificial substrates in a Taiwan stream. *Chin. J. Ent.* 19(1): 27-50. (With Chin. s.). — (Dept Ent., Natn Taiwan Univ., Taipei-106, Taiwan, ROC).  
Experiments were conducted in the upper Chingmei Stream. Artificial substrates were colonized by aquatic insects for periods of 3, 6, 12, 21, 30 and 42 days, from 15 Dec. 1990 to 26 Jan. 1991, at 2 sites: a polluted site caused by coal mining activities, and a recovery site further downstream. As far as the odon. are concerned, at the polluted site only Euphaea sp. occurred in abundance on all sampling days. Data are presented for Lestidae, Euphaea sp., Calopterygidae, Onychogomphus sp., Sieboldius sp., Stylogomphus sp. and Stylurus sp. Everywhere, Euphaea sp. was the dominant odon. sp.
- (12860) STERNBERG, K. & R. BUCHWALD, [Eds], 1999. *Die Libellen Baden-Württembergs*, Vol. 1: *Allgemeiner Teil, Kleinlibellen (Zygoptera)*. Eugen Ulmer, Stuttgart. 468 pp., 241 col. phot., 49 graphs & line drawings, 29 distribution maps, 21 tabs incl. ISBN 3-8001-3508-6. — Price: DEM 98.— net. — (Publishers: Wollgrasweg 41, D-70599 Stuttgart).  
A superb monograph on the Odon. of Baden-Württemberg, S Germany. The main chapters of the general pt (pp. 9-186) are: "Systematik, Taxonomie und Nomenklatur", "Fossile Libellen in Baden-Württemberg", "Faunistik und Ökologie", "Erfassungsmethodik und Kartierung", "Datenauswertung", "Gefährdung und gesetzlicher Schutz", "Zielartenkonzept", "Libellenlebensräume im Gewässermanagement", "Biotop-typen", "Systematik und Evolution der Libellen", "Bau und Funktion des Libellenkörpers", "Einige Aspekte zur Biologie der Libellen", "Habitat, Habitatselektion und Habitatbindung", "Populationsökologie und Ausbreitungsverhalten", "Thermoregulation", "Das Fortpflanzungsverhalten der Libellen: eine faszinierende Vielfalt, "Feinde, Parasiten und Kommensalen", "Libelle und Mensch: von der Teufelsnadel zum Bio-indikator". — The systematic pt (pp. 187-463) covers 26 Zygopt. spp. The depth and volume of information on adult and larval biology, etc. for each sp. are significantly larger than in any other hitherto published regional work. The concise style is enhanced by methodical infrastructure and section headings. — The bibliography is to be included in the 2nd (Anisoptera) vol., scheduled to appear shortly.
- (12861) STUIJFZAND, S.C., 1999. *Variables determining the response of invertebrate species to toxicants. A case study on the river Meuse*. PhD diss., Univ. Amsterdam. 124 pp., ISBN none. (With Dutch s.). — (Sect. Aquat. Ecol. & Ecotox., Univ. Amsterdam, Kruislaan 320, NL-1098 SM Amsterdam).  
The dissertation deals with *Dreissena polymorpha* (Bivalvia), *Chironomus riparius* (Dipt.) and *Hydropsychidae* (Trich.). In a graph, showing pesticide sensitivity to taxon, developmental stage and exposure time, based on original data and on published evidence, the odon. are represented by *Orthetrum albistylum speciosum* (cf. Y. Nishiushi & K. Asano, 1978, *Aquiculture* 26[1]: 26-30).
- (12862) SUGIMURA, M., S. ISHIDA, K. KOJIMA, K. ISHIDA & T. AOKI, 1999. *Dragonflies of the Japanese archipelago in color*. Hokkaido Univ. Press, Sapporo. xxxv+920 pp., 350 col. pls incl. (30.5x21.5 cm; 4.5 kg), wrappers & dustjacket. ISBN 4-8329-9771-8. — Price: ¥ 60.000.— net, 5% tax in Japan excl. (Jap., with Engl. title & taxonomic nomenclature). — (Publishers: Kita 9-jo Nishi 8-chome, Kita-ku, Sapporo, 060-0809, JA).  
This magnificent work is similar to the classical treatment of the Japanese fauna by Hamada & Inoue (cf. *OA* 5245), and was prepared in collaboration with the "Tombo to shizen wo kangaueru kai"; planner: M. Okudaira. All spp. are meticulously described, figured and keyed. The emphasis is on col. illustrations of all spp., in natural size (which makes some of the larvae too small for a ready recognition), viz. adult specimens (pls on pp. 3-303; hybrids & gynandromorphs on pp. 297-303), larvae (pp. 304-310). The types of behaviour are shown on pp. 311-352. Pictorial keys appear on



- pp. 355-404 (adults), 405-437 (larvae), with larval structural features on pp. 439-471. The introductory text (pp. 473-511) is followed by systematic treatments of the spp. (pp. 513-882), incl. line drawings of some structural peculiarities and distribution maps. In the regional Bibliography (pp. 883-906) over 2000 titles are listed. — (*Abstractor's Note*: An Engl. edition is to appear in the near future.)
- (12863) SWITZER, P.V. & W. WALTERS, 1999. Choice of lookout posts by territorial amberwing dragonflies, *Perithemis tenera* (Anisoptera: Libellulidae). *J. Insect Behav.* 12(3): 385-398. — (First Author: Dept Biol. Sci., Eastern Illinois Univ., Charleston, IL 61920-3099, USA).  
An observational study indicated that ♂♂ rarely perched directly at the oviposition site, but rather out from shore, within 2 m from the oviposition site. In an experimental study, an array of perches at different distances from the shore and oviposition site were provided to eliminate perch limitation as a factor in perch choice. The results confirmed the patterns evident in the observational study; ♂♂ perched farther from shore than their oviposition site was located. Interestingly, in both the observational and the experimental study, when neighbours were close, a ♂ perched away from his closest neighbour, which usually resulted in his oviposition site being closer to his neighbour than he was. Thus, ♂♂ *P. tenera* apparently alter their perch choice within their territories in response to the location of other ♂♂. These lookout post locations may provide the best opportunity for the territorial ♂ to perceive passing ♀♀ and intruding ♂♂, while minimizing conflict with their neighbours.
- (12864) SYMPETRUM, HYOGO, Vol. 6 (30 June 1999). (Jap., with Engl. s's). — (c/o S. Nishu, 247 Gunge Shonomoto, Migake-cho, Higashinada-ku, Kobe, Hyogo, 658-0057, JA).  
*Azuma, T. & T. Aoki*: Supposed westward expansion of *Ictinogomphus pertinax* in southern part of Hyogo prefecture (pp. 2-3); — *Nishu, S.*: *Stylurus oculatus* first found in Hyogo prefecture (p. 3); — *Sogame, S.*: Odonate fauna of Kohzuki and the neighbouring localities in Sanda city, Hyogo prefecture (pp. 4-7); — *Moriyasu, T.*: Larvae of *Macromia daimoji* first caught at Chikusa River, Hyogo prefecture (p. 8); — *Aoki, T.*: Odonata fauna of Kobe city, pt 8 (Libellulidae 2 and supplements) (pp. 9-13); — *Inoue, K., K. Kano, H. Kuwahara, O. Sano & I. Yahiro*: Records of Odonata from Guam Island, Mariana Islands, USA (pp. 14-22); — *Oka, I.*: Report of the survey trips of the Hyogo Society of Odonatology, pts 1 & 2 in 1998 focussed to *Libellula angelina* (pp. 23-28); — *Nishu, S.*: Report of the survey trip of the Hyogo Society of Odonatology, pt 3 in 1998 (pp. 29-32); — *Hatanaka, N.*: Report of the survey trip of the Hyogo Society of Odonatology, pt 4 in 1998 (pp. 33-35); — *Sasamoto, A. & K. Inoue*: *Anax guttatus* caught at Aonogahara, Hyogo prefecture (pp. 36-37); — *Matsuda, I.*: A late emergence of *Anax nigrofasciatus nigrofasciatus* (p. 38); — *Yagi, T.*: Collection records of *Anax guttatus* in Sanda city, Hyogo prefecture (p. 38); — Poster exhibition at the 9th Dragonfly Citizen Summit in Kobe (p. 39).
- (12865) THEISCHINGER, G., 1999. A new gomphid species from the Kimberleys in north-western Australia (Insecta: Odonata). *Linz. biol. Beitr.* 31(1): 369-372. — (2A Hammersley Rd, Grays Point, NSW 2232, AU). *Austrogomphus mouldsororum* sp. n. is described, illustrated, diagnosed and discussed. Holotype ♀: Western Australia, E Kimberley, Emma Gorge, El Questro Station; 28-XII-1991; deposited at AMS, Sydney. The ♂ is unknown.
- (12866) THEISCHINGER, G., 1999. A new species of *Petalura* Leach from south-eastern Queensland (Odonata; Petaluridae). *Linz. biol. Beitr.* 31(1): 159-166. — (2A Hammersley Rd, Grays Point, NSW 2232, AU). *P. litorea* sp. n. is described, illustrated and compared with *P. gigantea* Leach. Holotype ♂: Queensland, North Stradbroke Is., Brown Lake; 3-I-1976; deposited at ANIC, Canberra.
- (12867) THEISCHINGER, G., 1999. New and little-known Synthemistidae from Australia (Insecta: Odonata). *Linz. biol. Beitr.* 31(1): 373-379. — (2A Hammersley Rd, Grays Point, NSW 2232, AU). *Eusynthemis netta* sp. n. (holotype ♂: Queensland, Streams on Mt Lewis, NW Julatten; 15-XII-1998) and *E. ursa* sp. n. (holotype ♂: New South Wales, Barrington Tops, Dilgry R.; 10-XII-1979) are described. Type material is deposited at ANIC, Canberra. Also presented are illustrations of *Choristhemis olivei* (Till.) and illustrated descriptions of hitherto unknown ♀♀ *E. ursula* Theisch. and *Tonysynthemis ofarrelli* (Theisch. & Watson).
- (12868) TSUBAKI, Y., 1999. Wing colour development in a damselfly, *Mnais costalis*. *Insectarium, Tokyo* 36(4): 96-102. (Jap., with Engl. title & fig. captions).

- (Lab. Wildl. Conserv., Natn. Inst. Envir. Stud., Onogawa, Tsukuba, 305, JA).  
20 orange-winged ♂ were brought immediately after emergence to the laboratory, and were divided into 2 groups: one fed twice a day with 6 chironomids per individual, and the other fed twice a day with only 2 chironomids. The individuals of the first group developed a deep orange colour on wings, while those of the second group developed a pale orange colour on wings. This indicates that the intensity of wing coloration depends on the nutrition during the period of thoracal muscle development. — The chemical components of the wing colour substance were examined by means of radiolabelling. It appears that the red colour of mature ♂ perostigma is pigmented by an omochrome converted from <sup>14</sup>C-tryptophan, while the orange colour of wing veins and wing membranes consists of <sup>14</sup>C-tyrosine. — It is concluded that well-fed larvae result in a bigger adult, with bigger external skeleton. Such an immature imago will take sufficient food to develop massive thoracal muscle and deep wing coloration. Such individuals win a better position in the territory and have more chance to copulate. On the other hand, because of their aggressive behaviour they consume too much energy, therefore their longevity is shorter. — (See also OA 11928).
- (12869) [VAN DER NEUT, J.], 1999. Zeldzame libelle in Biesbosch — [A rare dragonfly in Biesbosch]. *Brabants Dagblad*, issue of 10 July. (Dutch). [Article in a regional newspaper:] The Author, a professional ranger, witnessed early in July 1999, at the Nieuwe Merwede, Dordtse Biesbosch, nr Dordrecht (Zuid Holland prov., the Netherlands) the emergence of hundreds *Gomphus flavipes* individuals. Since 1902 the sp. was considered extinct in the Netherlands, but in 1996 larvae were reported from the vicinity of Nijmegen.
- (12870) VAN LAAR, V., 1999. De terugkeer van de Weidebeekjuffer *Calopteryx splendens* (Odonata: Calopterygidae) in laaglandbeken van de Gelderse Vallei — Recolonization of lowland streams in the Gelderse Vallei by the Banded Agrion *Calopteryx splendens*. *Ent. Ber., Amst.* 59(8): 109-114. (Dutch, with Engl. s.). — (Gemeente Amersfoort, Schothorsterlaan 21, NL-3822 NA Amersfoort).  
Since the 1980s, water quality in the Gelderse Vallei brooks and rivers (Gelderland and Utrecht provinces, the Netherlands) has improved. Consequently, since 1983 the sp. has re-established the populations in the area. The recolonization seems to have started from 2-3 centres. By 1998, most of the lower reaches of the streams, even those running through urban areas, were occupied by ♂ showing territorial behaviour.
- (12871) VAN NIEUWKERKEN, E.J., 1999. [Book review] De danske guldsmede, by O.F. Nielsen. *Tijdschr. Ent.* 142(1): 124. (Engl.). — (Natn. Mus. Nat. Hist., P.O. Box 9517, NL-2300 Leiden).  
A book review of the work described in OA 12296, objecting to the lack of detailed locality data, the omission of an analysis of distributional trends, and to the rather too short reference list.
- (12872) VASCO ORTIZ, C.A., 1999. *Las libélulas del altoaragón*. Inst. Estud. Altoaragoneses, Huesca. 75 pp., col. pls incl. ISBN 84-8127-015-6. [Cuadernos Altoaragoneses de Trabajo, 22]. — (Orders to: R. Enjuanes, Inst. Estud. Altoaragoneses, C/Parque 10, ES-22002 Huesca; — Author: Avda Pirineos 9, 2<sup>B</sup>, ES-22004 Huesca).  
This is an attractive pictorial guide to the odon. fauna of Huesca prov., Spain (55 spp.). The morphology, ecology and biology are concisely outlined, a generic key is provided, and the regional fauna is genus-wise characterised. Col. portraits of all spp. represent an essential part of the book.
- (12873) VERDAAT, H. & A. HEESTERBEEK, 1999. Reuselse Moeren: inventarisatie project 1998/1999 — [The Reusel Swamps: inventarisatie project 1998/1999]. *Amoeba, Amst.* 73(3): 30-35. (Dutch). — (First Author: Veilig Oord 63, NL-5531 XD Bladel).  
The locality (surface 152 ha) is situated nr the village of Reusel, Noord Brabant prov., the Netherlands. A list is given of 38 odon. spp., evidenced during the "recent 3 yr". It includes several spp. of regional interest.
- (12874) VON DER DUNK, K., 1999. Weitere Insektenbeobachtungen in der Forstabteilung "Sauweiher" bei Rückersdorf im Nürnberger Reichswald. *Galathea* 15(2): 79-87. (With Engl. s.). — (Ringstr. 62, D-91334 Hemhofen).  
From the locality N of Nürnberg, N Bavaria, Germany, 6 odon. spp. are listed.
- (12875) WARRINGTON, S., 1999. The aquatic insects of Rye Meads Nature Reserve, Hertfordshire. *Ent. mon. Mag.* 135(1620/1623): 161-167. — (Dept Envir. Sci., Univ. Hertfordshire, Hatfield, Herts., AL10 9AB, UK).

- Lists 3 odon. spp.; – England.
- (12876) [WELDT, S.] KOCMUR, H., 1999. Dan s Sašom Weldtom, odonatologom – [A day with the odonatologist Saša Weldt]. *Nedelo, Ljubljana* 5(42): 16; issue of 17 Oct. (Slovene). – (c/o S. Weldt, Ul. 5. Prekomorske brigade 12, SI-2250 Ptuj).  
The reporter of a popular Slovene national weekly has accompanied a young member of the Slovene Odonatological Society at his field work (Draga fishponds nr Ig, Slovenia), and relates here her experience, with notes on various encountered spp. and on some general features of dragonfly life.
- (12877) WERNER, P., 1999. Why biotope mapping in populated areas? *Deinsea* 5: 9-26. (With Dutch s.). – (Inst. Wohnen u. Umwelt, Annstr. 15, D-64285 Darmstadt).  
Most biotope mappings in Germany include a detailed recording of plants and animals. Here, 82 towns were considered; the odon. mappings were executed in 44 (= 54%) of them.
- (12878) WILLIAMSONIA, Vol. 3, No. 3 (Aug. 1999).  
Published by the Michigan Odonata Survey. – (c/o Dr M.F. O'Brien, Insect Div., Mus. Zool., Univ. Michigan, 1109 Gaddes Ave., Ann Arbor, MI 48109-1079, USA).  
*O'Brien, M.*: DSA meeting report (p. 1); – Late summer musings (pp. 1-2); – *Shepard, B.*: The total amateur's adventures at the first symposium of the international dragonfly society meeting = WDA Congress at Colgate University (pp. 2-3); – *Steffins, W.*: Corrections on new articles about deformed dragonflies (p. 3); – (*Anonymous*): New publications available (pp. 3-4); – *Steffins, W.*: Hine's Emerald moves south (p. 4); – *Shappirio, E.*: Notes on dragonfly & damselfly activity at two sites in Washtenaw county during June & July 1999 (p. 5); – *O'Brien, M.*: Sayles Lake samples (pp. 6-7); – Delta dawns (p. 7); – (*Anonymous*): New state record summary (p. 7); *Tramea onusta*, *Somatochlora tenebrosa*, *Williamsonia lintneri*. – The announcement of the 1999 MOS meeting and the MOS mailing list conclude the valuable 10 pp. issue.
- (12879) YOKOI, N., 1999. Dragonflies of central Laos in mid-summer. *Gekkan-Mushi* 342: 2-7. (Jap., with Engl. title & taxonomic nomenclature). – (2-37-11, Kaisei, Kouriyama, Fukushima, 963-8851, JA).  
An annotated and commented list of 50 spp., collected 30-VII/4-VIII-1998 at 3 localities, viz. Vangieng, Thabok, and 30 km SE Vientiane. 24 of these were not previously recorded from Laos, from which country 123 spp. are known now.
- (12880) ZERCHER, D., 1999. *Hine's emerald dragonfly (Somatochlora hineana): draft recovery plan*. Technical/Agency draft. US Dept Interior, US Fish & Wildl. Serv., Great Lakes-Big Rivers Region, Fort Snelling/MN. vi+108 pp. – (Publishers: US Fish & Wildl. Serv., Div. Endangered Species, Bishop Henry Whipple Fed. Bldg, 1 Federal Dr, Fort Snelling, MN 55111-4056, USA); – Author: Cent. Aquat. Ecol., Illinois Nat. Hist. Surv., 607 East Peabody Dr., Champaign, IL 61820, USA).  
The current status, habitat requirements and limiting factors, recovery objectives, recovery criteria, actions needed, estimated and total cost of recovery, and the date of recovery of *S. hineana* are outlined in great detail. Various biological and environmental parameters, related to this sp. are shown in tabs, and a comprehensive reference list is provided.

## 2000

- (12881) BERNARD, R., 2000. On the occurrence of *Cercion lindenii* (Selys, 1840) in Poland (Odonata: Coenagrionidae). *Opusc. zool. flumin.* 177: 1-11. – (Dept Gen. Zool., Mickiewicz Univ., Fredry 10, PO-61701 Poznan).  
All Polish localities (30) are listed, their grid references are stated, and the strength of the respective local populations is assessed. It is suggested that the variation in the latter is due to the weather conditions prevailing in a particular yr. The Polish (i.e. the northernmost) part of the species range is described and defined in terms of the local climatology and topography.
- (12882) KIAUTA, M., 2000. Prvi žafran – The first crocus. *Mondena, Grosuplje & Ursus, Bilthoven* [Lyrics, Book 5]. 152 pp. (13.0 x 20.5 cm), hardcover, wrappers, ISBN 961-6319-05-1. Price NLG 48.-- net. (Bilingual: Slovene-Engl.). – (Orders to: Ursus, P.O. Box 256, NL-3720 AG Bilthoven, the Netherlands).  
A representative selection of her haiku, organized according to the 4 seasons, and incl. several on dragonfly motifs. The recasting from Dutch was provided by M. Javoršek & D. Voglar (into Slov.) and by D. Cobb & P. Moot (into Engl.); the illustrations are by M. Adriaens. A brief essay on Author's poetry, by D. Cobb, is also included.

- (12883) *ODONATOLOGICAL ABSTRACT SERVICE*, No. 5 (Jan. 2000). – (c/o J. Silsby, 1 Haydn Ave, Purley, Surrey, CR8 4AG, UK).  
Abstracts Nos 786-1188, on 50 pp., related to 1997-1999 publications.
- (12884) SUGIMURA, M., 2000. *Live together with tomo: 2000 calendar*. Tombo to shizen wo kangaeru kai, Nakamura. – (Author: 9-7, Uyama-satsuki-cho, Nakamura, Kochi, 787-0012, JA).  
A monthly calendar, with a dragonfly portrait for each month. Taxonomic nomenclature, with brief annotations in Jap.
- (12885) *W.D.A's AGRION*. Newsletter of the Worldwide Dragonfly Association, ISSN 1462-8449, Vol. 4, No. 1 (Jan. 2000). – (c/o J. Silsby, 1 Haydn Ave, Purley, Surrey, CR8 4AG, UK).  
Very largely, the issue (16 pp.) is devoted to WDA matters discussed and decided at the meetings held during their 1st Symp. Odonatol., Colgate, USA, July 1999. Minutes of the WDA Biennial General Meeting (pp. 1-5), and impressions from the Symposium (*M. Parr & P. Corbet*, pp. 1-5; *J. Silsby*, pp. 6-7) and from the Post-Symposium Tour to the Adirondacks (*D. Gennard*, p. 7) are provided. – Other signed articles of general interest: *Silsby, J.*: Two weeks cruising in the Mediterranean (p. 10; some records); – *Beckemeyer, R.*: Kids and dragonflies (pp. 10-11); – *Neboiss, A.*: Obituary for Dr Zandis Spuris (pp. 11-12; with bibliography).