

## ODONATOLOGICAL ABSTRACTS

### 1973

- (12597) GOSAR, M., 1973. *Življenje v mlaki* – [Life in the pond]. Prirodoslovni muzej Slovenije, Ljubljana. 48 pp. ISBN none. (Slovene). – (c/o Slovene Mus. Nat. Hist., P.O. Box 290, SI-1000 Ljubljana). A guide for a Museum exhibit on pond life in Slovenia, with minor references to the odon., without localities.

### 1975

- (12598) BRELIH, S., 1975. *Gospodarski pomen žuželk* – [The economic importance of insects]. Prirodoslovni muzej Slovenije, Ljubljana. 56 pp. ISBN none. (Slovene). – (Gotska ul. 13, SI-1000 Ljubljana). A guide for a Museum exhibit, with a passing reference to the odon.

### 1979

- (12599) VAN HERK, K., 1979. *Flora onder de rook van Utrecht* – [Flora in and in the vicinity of the city of Utrecht]. Inst. Natuurbeschermingseducatie, De Bilt-Utrecht-Zeist. 180 pp. ISBN none. (Dutch). On p. 65, *Aeshna cyanea* is photographically recorded from Maarseveen-Westbroek, Utrecht prov., the Netherlands.

### 1980

- (12600) BOTTGER, K., 1980. Qualitative und quantitative Benthonstudien an Bergbächen in Guatemala (Zentralamerika), unter besonderer Berücksichtigung der Hydrachnellae (Acari). *Arch. Hydrobiol.* 88(1): 96-119. (With Engl. s.). – (Zool. Inst., Univ. Kiel, Olshausenstr. 40, D-24100 Kiel). During July-Aug. 1974 and July-Aug. 1975, qualita-

tive and quantitative benthos samples were taken in various mountain streams nr Cobán. Data on odon. larvae are presented suborder-wise only.

- (12601) RAM, R., 1980. Vyādha patañge: bhaksaka aura bhaksa – [Dragonflies: predators and prey]. *Prani Jagat* 1: 101-102. (Hindi). – (Zool. Surv. India, M Block, New Alipore, Calcutta-700053, India). General, in the popular Hindi bulletin of the Zoological Survey of India.

- (12602) SRIVASTAVA, V.D., 1980. Kītā jagata ke helikāptera – [Helicopter in the insect world]. *Prani Jagat* 1: 95-98. (Hindi). – (Zool. Surv. India, M Block, New Alipore, Calcutta-700053, India). General on dragonflies, in the popular Hindi bulletin of the Zoological Survey of India.

### 1982

- (12603) HEARN, L., 1982. *A Japanese miscellany: strange stories, folklore gleanings, studies here & there*. Charles E. Tuttle, Rutland/VT-Tokyo. 302 pp. [9th printing]. ISBN 0-8048-0307-2. (All Jap. expressions and texts in Latin transliteration, with Engl. translation). A chapter, "Dragon-flies", appears on pp. 75-118. It includes Japanese traditional names for 32 spp. (with some figs, but no taxonomic names), a considerable number of commented *haiku* and *tanka*, and the description of some traditional children games/dragon-fly catching.

### 1985

- (12604) THAKUR, R.K., 1985. Field notes on the Odonata around lake Kailana, Jodhpur (Rajasthan).

*Bull. zool. Surv. India* 7(1): 143-147, pl. 2 excl. — (Desert Regn. Stn, Zool. Surv. India, Jodhpur, Rajasthan, India).

A commented list of 18 spp., with a detailed description of the lake habitats.

### 1989

- (12605) BEUTELSPACHER, C.R., 1989. *Las mariposas entre los antiguos Mexicanos*. Fondo Cultura Económica, Mexico. 104 pp. ISBN 968-16-3042-4. — (Publishers: Av. de la Universidad 975, MX-03100 Mexico, D.F.).

The book deals with the pre-Columbian Lepidoptera representations in Mexico, based on the few codices that have survived the Spanish conquest. Some other insects are also represented. Fig. 273 (p. 87; text on p. 88) shows a dragonfly, and comes from *Codex Kingsborough* ("Memorial de los Indios de Tepetlaóztoc en contra de los encomenderos españoles", published 1912. — (*Abstracter's Note*: In Maya language, the "dragonfly" is called "tulix". Well-known is the Maya dragonfly superstition: "If a dragonfly comes into a house, flying low over the ground, a non-welcome visitor is soon to be expected. If the flight of the dragonfly is high, a welcome guest is to come". [Communicated by Dr S. Da Silva Aguiar, Matosinhos, Portugal].

### 1993

- (12606) KIECKBUSCH, G., 1993. Aufregendes Leben hinterm Schilf. *Naturk. Beitr. DJN* 28: 70-71. — (Fritz-von-Wille-Str. 5, D-54296 Trier).  
A brief literary sketch from dragonfly life.

### 1996

- (12607) CURRY, J.R., 1996. An updated checklist of Indiana dragonflies (Odonata: Anisoptera). *Proc. Indiana Acad. Sci.* 105(3/4): 217-223. — (Dept Biol., Franklin Coll., Franklin, IN 46131, USA).  
98 spp. are listed. The record of *Somatochlora hineana* is considered "suspect", and the status of *Macromia wabashensis* is uncertain. *Stylurus scudderi* is added to the state list (1 ♀, Lagrange Co., 15-VII-1995).
- (12608) FALLS, B., 1996. The Odonata of Long Point. *Ontario Insects* 1(3): 42-43, 46. — (14 Tottenham Rd, Don Mills, ON, M3C 2J4, CA).  
An annotated list of 46 spp., based on literature and

on Author's unpublished material, gathered during 55 days at 23 localities. — Ontario, Canada.

- (12609) HOLDER, M., 1996. Algonquin Provincial Park's dragonflies and damselflies. *Ontario Insects* 1(3): 41, 45. — (Nat. Heritage Inf. Cent., P.O. Box 7000, Peterborough, ON, K9J 8M5, CA).  
A comprehensive description of the work, as listed in OA 10984.
- (12610) PRATT, P.D., 1996. Checklist of the Odonata of Ontario. *Ontario Insects* 2(1): 9-12. — (7100 Matchette Rd, La Salle, ON, N9C 2S3, CA).  
159 spp.
- (12611) RITZAU, C. & V. HAESELER, 1996. Zur Libellenfauna der Ostfriesischen Inseln (Insecta: Odonata). *Natur Heimat, Münster* 56(3): 77-82. — (Terrest. Okol., FB 7, Univ. Oldenburg, Postfach 2503, D-26111 Oldenburg).  
*Sympecma fusca* (from Wangerooge), *Erythromma viridulum*, *Anax imperator*, *A. parthenope*, and *Leucorrhinia rubicunda* (all from Borkum) are for the first time recorded from the East Frisian Islands, Germany.
- ### 1997
- (12612) BLISCHKE, H., C. BRAUNS, O. KISSLING & C. VEEN, 1997. Beitrag zum Pflege- und Entwicklungsplan für den Rödel. *NatSchutz Sachsen-Anhalt* 34(1): 25-38. — (First Author: Im Krummen Sieke 54, D-30419 Hannover).  
NR "Tote Täler" was in 1995 enlarged by the inclusion of the "Rödel" area, Burgenland distr., Halle, E Germany. 19 odon. spp. were evidenced in 1995 (but are not listed here). In the present paper, the occurrence of 6 mediterranean and/or thermophile spp. in the "Rödel" is emphasized.
- (12613) BÖHMER, J. & H. RAHMANN, 1997. [Faunistische Aspekte der Sukzession, der Rekultivierung und des Naturschutzes in Steinbrüchen Südwestdeutschlands]: Libellen. In: P. Poschlod, U. Tränkle, J. Böhmer & H. Rahmann, Steinbrüche und Naturschutz: Sukzession und Renaturierung, pp. 407-412, Ecomed, Landsberg; ISBN 3-609-69370-3. — (c/o D. Rothmund, Rupert-Mayer-Str. 20, D-73765 Neuhausen/F.).  
10 odon. spp. are listed from the quarry of Gerhausen, Blaubeuren area, Baden-Württemberg, SW Germany.

- Annotations are provided for each sp., and the odon. assemblage of the small stone-pit habitats is briefly compared with that of the biologically more favourable gravel-pits.
- (12614) COLLINGWOOD, N., 1997. *The dragonflies of Staffordshire*. Staffordshire Biological Recording Scheme Publication No. 18. 79 pp. ISBN 1-874414-22-X. — Price: £ 5.95 net, postage excl. — (Orders to: Leisure & Cultural Services Dept, Potteries Mus. & Art Gallery, Bethesda St., Hanley, Stoke-on-Trent, ST1 3DE, UK).  
Yet another British county dragonfly book, covering 26 spp., with descriptions, county distribution maps, information on flight periods, local breeding status, on habitats and on the Staffordshire history and current status of each sp. The descriptions are very brief and rather incomplete, and figs (col. aquarelles) are few, therefore a reliable identification will be difficult in some cases. Some editorial shortcomings are somewhat annoying, viz. fig. numbering is not consecutive, and the References are poorly styled. Useful will be the chapters on dragonfly watching and netting, and on photography.
- (12615) HOLDER, M., 1997. Odonata monitoring project begins. *Ontario Insects* 2(2): 38. — (Nat. Heritage Inf. Cent., P.O. Box 7000, Peterborough, ON, K9J 8M5, CA).  
The description of the Ontario (Canada) Odon. monitoring project, as conducted by the Natural Heritage Information Centre at Peterborough.
- (12616) HOLDER, M., 1997. Ontario odonate news. *Ontario Insects* 3(1): 13. — (17 Flemington Court, Whitby, ON, L1N 5X1, CA).  
Annotations on recent records of 9 interesting or rare spp. in Ontario, Canada, viz. *Amphiagrion saucium*, *Argemophus villosipes*, *Gomphus borealis*, *G. externus*, *G. graslinellus*, *G. vastus*, *Gomphaeschna furcillata*, *Neurocordulia yamaskanensis*, and *Tramea onusta*.
- (12617) HOLDER, M., 1997. Searching for underwater Odonata. *Ontario Insects* 2(3): 54-55. — (Nat. Heritage Inf. Cent., P.O. Box 7000, Peterborough, ON, K9J 8M5, CA).  
Detailed suggestions re the collecting of larvae and exuviae, laboratory rearing, and identification.
- (12618) JONES, C.D., 1997. The Algonquin odonate count: a first for Canada? *Ontario Insects* 2(2): 33. — (Algonquin Prov. Park, P.O. Box 219, Whitney, ON, K0J 2M0, CA).  
On a non-specified date, a 1-day count was conducted within a 15 mi diameter, by 11 observers. 760 individuals of 38 spp. were evidenced; a checklist is included. — For the subsequent odon. counts in Algonquin Prov. Park, Ontario, Canada see OA 12639 and 12680.
- (12619) KUHN, J., 1997. Die Libellen des Murnauer-Mooses und der Loisachmoore (Oberbayern): Fauna-Lebensräume-Naturschutz. *Ber. bayer. Akad. NatSchutz LandschaftsPfl.* 21: 111-147. — (Marktstr. 26, D-89143 Blaubeuren).  
This is the largest conserved moor complex in southern Germany. Its odon. fauna (55 spp.) is here reviewed and commented. 58 localities are considered and precise habitat features and conservation aspects are species-wise defined.
- (12620) MITRA, T.R., 1997. Studies on the role of dragonflies (Insecta: Odonata) in controlling the population of mosquito. *Abstr. Pap. natn. Symp. Biol. sustainable Develop.* [Golden Jubilee zool. Soc. Calcutta], p. 33 [abstract only]. — (18/1 Dakshin Para Rd, Calcutta-700028, India).  
Based on field observations nr Calcutta and on laboratory work with *Crocothemis servilia* and *Bradinopyga geminata*, the release of odon. larvae in water tanks is advocated.
- (12621) MULLER, J., 1997. Mittellandkanal und Elbe als Refugien gefährdeter Keiljungferarten. *NatSchutz Sachsen-Anhalt* 34(1): 52-56. — (Frankefelde 3, D-39116 Magdeburg).  
The occurrence of *Gomphus vulgatissimus* in NR Drömling (on the Weser-Elbe-Kanal), and *G. (Stylurus) flavipes* in Biosphere Reserve "Mittlere Elbe" is described and discussed, and the importance of nature reserves in that region is emphasized; — Sachsen-Anhalt, E Germany.
- (12622) OTTVALL, R., 1997. Vandrande mosaikslända, Hemianax ephippiger, och vandrande ängstrollslända, Sympetrum fonscolombei, funna på södra Öland. — The dragonflies Hemianax ephippiger and Sympetrum fonscolombei (Odonata: Aeshnidae and Libellulidae) found on the Baltic island of Öland. *Ent. Tidskr.* 118(4): 193-196. (Swed., with Engl. s.). (c/o Ottosson, Dag Hammarskjölds väg 5 G, S-22464 Lund).

In a migrating bird trap, at Ottenby Bird Observatory, located at the southern point of Öland, 3 ♂ and 3 ♀ *H. ephippiger* were caught on 25/26-VI-1995, and 3 ♂ and 1 ♀ *S. fonscolombeii* were trapped between 7/21-VII-1997. These are the first records for Sweden.

- (12623) *STUDIA ODONATOLOGICA HUNGARICA*, No. 3 (dated 30 Dec. 1997; received June 1999). ISSN 0217-453X. (Hung., with Engl. s's). – (c/o Dr G. Dévai, Dept Ecol., Kossuth Univ., P.O. Box 71, HU-4010 Debrecen).

*Dévai, G., I. Dévai, B. Tóthmérész & M. Miskolczi*: Methodological problems in the evaluation of faunistic data taking dragonflies (Odonata) as an illustrative example, pt 2: Collection and evaluation of basic reference (pp. 5-20); – *Dévai, G.*: Proposal for the quantitative surveying of dragonfly adults (Odonata) (pp. 21-33); – *Egyed, M. & L. Krupinszki*: Faunistic data on adult dragonflies (Odonata) from the active and ancient floodplain of river Tisza between Tiszabercel and Gávavencsellő (NE Hungary) (pp. 35-41); – *Bánkuti, K., G. Dévai & M. Miskolczi*: Faunistic data on dragonfly (Odonata) exuviae from the active floodplain of river Tisza between Tiszabercel and Gávavencsellő (NE Hungary) (pp. 43-47); – *Dévai, G., M. Miskolczi & J. Kátai*: Faunistic data on adult dragonflies (Odonata) from the active floodplain of river Tisza between Tiszabercel and Gávavencsellő (NE Hungary) (pp. 49-61); – *Dévai, G. & M. Miskolczi*: Ecological state assessment and qualification of the active floodplain of river Tisza between Tiszabercel and Gávavencsellő (NE Hungary) on the basis of the dragonfly (Odonata) fauna (pp. 63-81); – *Tibor, J.*: [Book review] of the volume listed in OA 5549 (pp. 83-84).

### 1998

- (12624) [BAKOWSKY, W. & K. NESS], 1998. The zebra mussel and the dragonfly. *Ontario Insects* 3(2): 27. – (Text styled anonymously by the Editor). A record of *Epiheca princeps* exuviae, spotted on the grass, with a zebra mussel attached to its side; – Clear Lake, Peterborough Co., Ontario, Canada. A phot. is provided.
- (12625) BECHLY, G., 1998. A revision of the fossil dragonfly genus *Urogomphus*, with description of a new species (Insecta: Odonata: Panainisoptera: Aeschnidiidae). *Stuttg. Beitr. Naturk. (B)* 270: 1-47. (With Germ. s.). – (Breslauer Str. 30, D-71034

Böblingen).

The Upper Jurassic genus of Germany is revised and its position in Aeschnidiidae is confirmed. *U. giganteus* and *U. eximius* are redescribed and a lectotype for the latter is designated. *U. nusplingensis* sp. n. is described from the Upper Jurassic Limestone of Nusplingen. *U. abscissus* is considered conspecific with *Berberiaeschnidia inexpectata*, and the holotype of the latter is designated as the neotype of the former. The phylogenetic position of *Urogomphus* in Aeschnidiidae is discussed, a new taxon, Neainisoptera, is introduced, and an explanation for the extinction of Aeschnidiidae is proposed.

- (12626) BECHLY, G., 1998. New fossil dragonflies from the Lower Cretaceous Crato Formation of north-east Brazil (Insecta: Odonata). *Stuttg. Beitr. Naturk. (B)* 264: 1-66. (With Germ. s.). – (Breslauer Str. 30, D-71034 Böblingen).

Currently, 32 spp., referable to 12 fams, are known from the Crato Formation. Here are described as new: *Araripegomphus andrenei* sp. n. (Araripegomphidae), *Cordulagomphus (Procordulagomphus stat. n.) senckenbergi* sp. n. (Proterogomphidae), *Araripephlebia mirabilis* gen. n., sp. n. (Araripephlebiidae fam. n.), *Cratocordulia borschukewitzi* gen. n., sp. n. (Araripephlebiidae), *Cretarchistigma (?) essweini* sp. n. (Zygoptera incertae sedis), and *Parahemiphebia mickoleiti* sp. n. (Hemiphebiidae). With a wing length of only 9 mm, the latter is one of the smallest known odon. The phylogenetic relationships of several spp. are discussed, and some diagnoses are amended or corrected.

- (12627) BROCKHAUS, T., 1998. Gemeinsame Vorkommen der Smaragdlibellen *Somatochlora alpestris* (Selys, 1840) und *Somatochlora arctica* (Zetterstedt, 1840) im Erzgebirge (Odonata: Corduliidae). *Veröff. Mus. Naturk. Chemnitz* 21: 79-82. – (An der Morgensonne 5, D-09387 Jahnsdorf/Erzgebirge). Commented records of the 2 spp., co-occurring at "Grosser Kranichsee" and "Mothäuser Heide", Erzgebirge, E Germany.

- (12628) BROCKHAUS, T., 1998. Libellenbeobachtungen in der Dahleiner Heide (Insecta: Odonata). *Mitt. sächs. Ent.* 42: 17. – (An der Morgensonne 5, D-09387 Jahnsdorf/Erzgebirge). Brief field notes on 9 spp., Elbtal, E Germany.

- (12629) BUCZYŃSKI, P. et al., 1998. *Poleski park narodowy. Przewodnik: historia-przyroda-turystyka – [Poleski National Park. Guide: history-nature-tourism]*. Poleski Park Narodowy, Urszulín. 64 pp., 16 col. pls + 1 map excl. ISBN 83-908003-7-3. (Pol.). – (Publishers: Ul. Chelmska 7, PO-22-234 Urszulín).  
The odon. are dealt with on pp. 39-40. So far, 48 spp. were recorded from the Park, E Poland. A checklist is not given, but some of the regionally important spp. are emphasized (*Sympecma paedisca*, *Nehalennia speciosa*, etc.), and a col. phot. of *Brachytron pratense* is included.
- (12630) BUCZYŃSKI, P. & S. CZACHOROWSKI, 1998. *Przyczynek do poznania ważek (Insecta: Odonata) pojezierzy północno-wschodniej Polski. – Contribution to the cognition of dragonflies (Insecta: Odonata) of lake districts in the north-eastern Poland. Przegł. przyrod. 9(3): 45-55. (Pol., with Engl. s.). – (First Author: Inst. Zool., UMCS, ul. Akademicka 19, PO-20-033 Lublin).*  
New information is presented on the occurrence of 39 spp. in Masurian Lake District and in the eastern part of the Pomeranian Lake District, NE Poland. *Lestes viridis* is new to the region. Of particular interest are also the records of the "Berne Convention spp.", *Sympecma paedisca*, *Ophiogomphus cecilia* and *Aeshna viridis*.
- (12631) BUTTSTEDT, L. & M. JENTZSCH, 1998. *Zur Flora, Fauna und Gebietsausstattung des Naturschutzgebietes "Hackpfüffler See" und seiner Umgebung. NatSchutz Sachsen-Anhalt 35(1): 3-10. – (First Author: Ziegeleistr. 26, D-06536 Rossla).*  
Lists 18 odon. spp. from this nature reserve, Kyffhäuser, Sachsen-Anhalt, E Germany. *Calopteryx splendens* and *Anaciaeschna isosceles* are considered of local interest.
- (12632) CAICEDO, O. & J. PALACIO, 1998. *Los macroinvertebrados béticos y la contaminación orgánica en la quebrada La Mosca (Guarne, Antioquia, Colombia). Actualid. biol., Medellín 20(69): 61-73. (With Engl. s.). – (First Author: Depto Biol., Univ. Antioquia, Medellín, Colombia).*  
It does not include a checklist of the evidenced taxa, but *Hetaerina* sp. and *Brechmorhoga* sp. occurred in the samples taken in La Mosca stream, E of Antioquia Dept, Colombia, Oct. 1987-Sept. 1988.
- (12633) CORDERO RIVERA, A. & F.J.E. PEREZ, 1998. *Mating frequency, population density and female polychromatism in the damselfly Ischnura graellsii: an analysis of four natural populations. Etologia 6: 61-67. (With Span. s.). – (Depto Ecol. & Biol. Animal, Univ. Vigo, E.U.E.T. Forestal, Campus Universitario, ES-36005 Pontevedra).*  
The maintenance of ♀ polymorphism is addressed by reanalysing data from 2 natural populations studied by A. Cordero (1992, *J. Anim. Ecol.* 61: 769-780) and 2 additional populations. Mark-resighting methods were used to estimate mating frequencies by ♀ morphs. The results indicate that ♀ mating probability is positively related to ♂ density in 3 populations, but androchrome ♀♀ mated less often than gynochromes in one sample. ♀ morphs did not differ in size and oviposition frequency. Nevertheless, androchrome frequency was positively related to an index of ♂ density. It is suggested that population density might have an effect on the maintenance of ♀ morphs in this sp., though not so because of mating avoidance by androchrome ♀♀. A more accurate analysis of the benefits and costs of mating in polychromatic *Zygopt.* is needed.
- (12634) DANNELID, E. & H. BERGLUND, 1998. *Spetsfläckad trollslända (Libellula fulva) funnen i Botkyrka kommun, Södermanland – The Scarce chaser (Libellula fulva) recorded in Botkyrka. Ent. Tidskr. 119(3/4): 149-150. (Swed., with Engl. s.). – (First Author: Zool. Inst., Univ. Stockholm, S-10691 Stockholm).*  
In 1997 and 1998 the sp. was rather common in Botkyrka kommun, S of Stockholm. This is its northernmost locality in Sweden. So far it was known from Emån and Småland, in SE Sweden only.
- (12635) FERRERAS-ROMERO, M., 1998. *Preparando la lista roja de los odonatos en Andalucía. Zool. baetica 9: 107-116. (With Engl. s.). – (Mejorana 2, ES-14012 Córdoba).*  
The Andalusian status of 11 spp. is discussed. 10 of these are recommended for redlisting; – Andalusia, Spain.
- (12636) GEISLER-STROBEL, S., J. BUGNER, R. FELDMANN, K. GÜNTHER, J. GRAS, F. HERBST & K. SELUGA, 1998. *Bergbaufolgelandschaften in Ostdeutschland: durch Sanierung bedrohte Sekundärlebensräume. Vorkommen hochgradig gefährdeter Tierarten im Tagebau Goitsche bei Bitterfeld. NatSchutz LandschaftsPlan. 30(4): 106-*

- 114. (With Engl. s.). — (Ökoplan, Trendelenburgstr. 16, D-04289 Leipzig).  
After the German re-unification in 1990, 44 open-cast coal mines were abandoned in E Germany. By now, 50% (400 km<sup>2</sup>) of the areas affected by mining activities have been recultivated. The open-cast mines in E Germany represent last refuges for many endangered animal spp., which will disappear if the future recultivation would neglect the conservational aspects. In the present paper, some considerations are presented on 6 odon. spp. threatened in the Goitsche area, Leipzig region.
- (12637) HAUPT, H., 1998. Zusammenstellung der aktuellen Roten Listen der Tiere für die Bundesländer. *SchrReihe LandschaftsPfl. NatSchutz* 55: 301-338. — (Author's address not stated).  
Includes a bibliographic review of odon. Red Lists of 15 federal states of Germany. For the German federal Red List see OA 12161.
- (12638) HOLDER, M. & D. SOUTHERLAND, 1998. Tracking rare insects in Ontario. *Ontario Insects* 3(2): 28-32. — (First Author: Nat. Heritage Inf. Cent., P.O. Box 7000, Peterborough, ON, K9J 8M5, CA).  
The information on the operation and set-up of the Natural Heritage Information Centre, and a list of spp. tracked by the institution (incl. many odon.), as of 10 Jan. 1998, are provided.
- (12639) JONES, C.[D.], 1998. The 1997 Algonquin odonate count. *Ontario Insects* 3(2): 34-35. — (Algonquin Prov. Park, P.O. Box 219, Whitney, ON, K0J 2M0, CA).  
The count was conducted on 6 July, within a 15 mi diameter, by 27 observers. 3157 individuals, referable to 55 spp. were evidenced. A checklist is included. — Algonquin, Ontario, Canada.
- (12640) [KOSELJ, K. & M. SKORNIK], [tutors], 1998. [A collection of 5 school papers on dragonflies, produced by the students of the Bežigrad Grammar School, Ljubljana]. (Slovene). — (c/o K. Koselj, Adamičeva 2, SI-1000 Ljubljana).  
*Ahlin, M., B. Bitenc & L. Gornik*: Preobrazba v naravi: kačji pastirji spomladi na Koseškem bajerju [Metamorphosis in nature: dragonflies in the spring at the Koseze Pond] (8 pp.); — *Brezigar, J. & M. Žajdela*: Razvoj kačjih pastirjev [Observations on dragonfly life history at the Koseze Pond] (5 pp.); — *Karas, J. & I. Perpar*: Probrzba kačjega pastirja [Metamorphosis of a dragonfly] (3 pp.); — *Kristan, J. & V. Jankovič-Dolenc*: Pisani svet kačjih pastirjev [Variegated world of dragonflies at the Koseze Pond] (9 pp.); — *Testen, Ž. & K. Jakopič*: Kačji pastirji [Indoor observations on dragonfly larvae] (7 pp.). — (*Abstractor's Note*: The authors of these "research papers" are aged ca 16. This is the first dragonfly "research project" of this kind on record in Slovenia. The choice and treatment of the aspects studied, and the scope and style of presentation are rendering a good insight into the field & indoor observation capacities at this age, into the ability of handling a certain volume of technical literature, and into the team-work capacities of secondary school students. — The Koseze Pond is an old, large and locally popular clay pit, with natural vegetation succession, at the NW outskirts of Ljubljana, Slovenia. Among the state grammar schools in the Slovene capital, the Bežigrad one is known for its excellency).
- (12641) KRETZSCHMAR, W. & F. PIMPL, 1998. Fauna saxonica, 2. Libellen (Odonata): Vorläufige Verbreitungskarten des gemeldeten Erfassungsstandes von 1996 für die Zeit 1990 bis 1996. *Mitt. sächs. Ent.* 40: 3-30, with an editorial Preface on p. 2. — (First Author: Hauptstr. 28, D-01640 Coswig).  
Distribution maps for 55 spp., without annotations; — Saxony, E Germany. — In the anonymous editorial Preface, the current status of the fauna of the state is summarized.
- (12642) LEGLER, K., D. LEGLER & D. WESTOVER, 1998. *Color guide to common dragonflies of Wisconsin*. [Revised edn]. Legler, Sauk/WI. 64 pp., col. pls incl. ISBN none. (Softcover 17 × 21 cm). — Price: US \$ 18.95 net. — (Orders to: K. Legler, 429 Franklin St., Sauk, WI 53583, USA).  
First published in 1995, this is largely a pictorial "guide", with brief annotations, covering 76 (out of 110 known) Wisconsin Anisopt. spp. It contains 167 col. phot, supplemented by 64 line drawings, illustrating identification details.
- (12643) MITRA, T.R., 1998. Observation on the relationship between fish fry and odonatanymph (Odonata: Insecta). *Abstr. Pap. natn. Symp. Fish Shellfish Farming*, Calcutta, pp. 38-39 [abstract only]. — (18/1 Dakshin Para Rd, Calcutta-700028, India).  
Field- and laboratory experiments with *Brachythemis contaminata* and *Bradinyopyga geminata* in Calcutta, India have shown that their larvae preferably feed on

- mosquito larvae and other invertebrates, turning their attention to fish only when the invertebrates are lacking. It is argued, therefore, that odon. larvae in fish farms actually do not affect the fish population.
- (12644) NESSIMIAN, J.L., L.F.M. DORVILLE, A.M. SANSEVERINO & D.F. BAPTISTA, 1998. Relation between flood pulse and functional composition of the macroinvertebrate benthic fauna in the lower Rio Negro, Amazonas, Brazil. *Amazoniana* 15(1/2): 35-50. (With Port. s.). — (First 3 Authors: Depto Zool., Inst. Biol., UFRJ, Caixa Postal 68044, BR-21944-970 Rio de Janeiro).  
In a 12-month study at the archipelago of Anavilhanas, Amazonas state, the macroinvertebrate fauna was sampled at the margins of Redondo lake, connected permanently to Rio Negro. 5 odon. fams are (mostly genus-wise) considered.
- (12645) PURGER, J.J., 1998. Diet of Red-footed falcon, *Falco tinnunculus*, nestlings from hatching to fledging. *Ornis fenn.* 75(4): 185-191. — (Dept Ecol. & Zoogeogr., Janus Pannonius Univ., Ifjúság u. 6, HU-7601 Pécs).  
The nestling diet was studied nr Melenci, Voivodina, Serbia. 6% of the identified prey items were referable to vertebrates, the other to insects, incl. 4% (at least 5 spp.) to odon. All prey taxa are listed.
- (12646) ROTHMUND, D. & U. HAHN, 1998. Beitrag zur Kenntnis der Libellenfauna eines Hochwasserrückhaltebeckens im Landkreis Göppingen (Baden-Württemberg). *Mitt. ent. Ver. Stuttg.* 33: 124-130. — (First Author: Rupert-Mayer-Str. 20, D-73765 Neuhausen/F.).  
A sequel to the paper listed in OA 12647, covering the 1997 season. 9 spp. were evidenced as autochthonous.
- (12647) ROTHMUND, D., U. HAHN & K. ZINTZ, 1998. Untersuchungen der Libellenfauna eines württembergischen Hochwasserrückhaltebeckens. *Wasserwirtschaft* 88(6): 290-296. (With Engl. s., tab. & fig. captions). — (First Author: Rupert-Mayer-Str. 20, D-73765 Neuhausen/F.).  
For an earlier report on the odon. fauna of the flood control reservoir (Lake Herrenbach) nr Göppingen, Baden-Württemberg, SW Germany see OA 11411. Up to and incl. 1996, 20 spp. were evidenced, 12 of these breeding in the lake. The fauna was not adversely affected by draining and mud clearing. From the conservancy point of view the lake is not considered notably important, serving rather as a stepping stone habitat. — See also OA 12646.
- (12648) RYAZANOVA, G.I., 1998. Territorial'naya konkurenciya kak mehanizm sderzhivaniya kannibalizma u lichinok strekoz. — Territorial competition as the cannibalism suppression mechanism in larval odonates. *Vest. mosk. Univ.* (XVI) 1998(2): 30-34. (Russ., with Engl. s.). — (Dept Ent., Fac. Biol., Moscow St. Univ., RUS-119899 Moscow).  
The connection of the cannibalism degree with larval possibility of realization of even spatial distribution (typical territorial competition distribution) was investigated in laboratory experiments with *Calopteryx splendens*. Density-dependent effect of cannibalism and the increase of cannibalism with the increase of movements of the larvae are recorded.
- (12649) SAMWAYS, M.J. & R. OSBORN, 1998. Divergence of a transoceanic circumtropical dragonfly on a remote island. *J. Biogeogr.* 25(5): 935-946, cover phot.excl. — (Invert. Cons. Res. Cent., Dept Zool. & Ent., Fac. Sci., Univ. Natal, P/Bag X01, Scottsville-3209, SA).  
The variation and differences in morphology and behaviour of an African continental (Pietermaritzburg, S Africa) and a remote island population (Easter Island) of *P. flavescens* was investigated to determine whether the island population was panmictic with the migrant population, or whether it was a founder population. Several morphological characters were measured in both populations, and analysed using PCA, t-tests, coefficients of variation and Chi-square analyses. The continental and island populations were significantly different in body colour, head width and femur length. The island population had reduced hindwings, which were also more asymmetrical than the continental population, suggesting that the island individuals were possibly more genetically and environmentally stressed and had less genetic variation than the continental population. The island population was also more robust and flew lower to the ground than the continental population. There was no significant difference in body weight between the 2 populations because the migrant population had not begun to build up fat reserves for migration. ♀♀ were heavier than ♂♂ in the continental population because they were carrying eggs. This was not the case in the island population because the individuals were not as mature. Colour was significantly different between the 2 populations, with island individuals having darker

wings and abdomens, yet a lighter synthorax colouring than the continental population. Sexual dimorphism was marked in the abdomen and wing colour of the continental population, yet the island individuals showed more difference between the sexes in morphological characters than in colour. The fact that *P. flavescens* is the only dragonfly sp. on Easter Island and the great distance of the island from any mainland suggest infrequent arrival of migrants arriving on the island with resultant reduced genetic variation. The morphological and behavioural differences between the 2 populations suggest the occurring of a divergence.

- (12650) SUGIMURA, M., 1998. [Odonata of the Shimanto river]. *Green Power* 1998(1-12): 12 instalments, on p. 45 of each issue. (Jap.). — (Author: 9-7, Uyama-satsuki-cho, Nakamura, Kochi, 787-0012, JA; — Publisher: Shinrin Bunka Kyokai, c/o Asahi Shimbun, 5-3-2, Tsukiji, Chuo-ku, Tokyo, 104-8011; — Engl. translation provided by: N. Ishizawa, 1644-15, Yamaguchi, Tokorozawa, Saitama, 359-1145, JA). The main features and a number of peculiarities in the Japanese dragonfly life are outlined on the basis of concise "biological portraits" of 11 selected spp., enhanced by field photographs. — Shimanto R., Kochi pref., Japan.
- (12651) SUZUKI, K., 1998. A synopsis of classification, geographical distribution and variation in the Japanese *Mnais* damselflies, with a proposal of the new zoogeographical boundary, "Mnais Line". *Bull. Hoshizaki Green Fund.* 2: 289-314. (Jap., with Engl.s. — (Dept Biol., Fac. Sci., Toyama Univ., 3190 Gofuku, Toyama-shi, 930-8555, JA). The classification, geographical distribution and geographical variation in the Japanese *Mnais* taxa are outlined. A new zoogeographical boundary, named the 'Mnais Line', suggested for the N-S belt along the Sendai-gawa and Yoshii-gawa river systems, SW Honshu, is proposed. The Author's '4 spp.hypothesis' (cf. *OA* 5202) is revisited and detailed. A tentative taxonomy of the Japanese *Mnais* taxa is documented by maps, and the coexistence/non-coexistence of different taxa in the same habitat is emphasised and discussed.
- (12652) WAIN, W.H. & C.B. WAIN, 1998. Observations on the Odonata of Silhouette, Seychelles Archipelago. *Phelusana* 6: 27-31. — ("The Haywain", Hollywater Rd, Bordon, Hants, GU35 0AD, UK). During 17-24 Nov. 1997, 12 spp. were identified, 5 of which were previously unrecorded, extending the species list to 14. All 12 spp. recorded in this survey showed some evidence of breeding, though this was confirmed for *Anax guttatus* only.

## 1999

- (12653) ANAX, WIEN. Mitteilungsblatt der Osterreichischen Arbeitsgemeinschaft Libellen (ÖAL), Vol. 2, No. 1 (18 March 1999). — (c/o R. Raab, Anton-Brucknergasse 2/2, A-2232 Deutsch-Wagram). *Chovanec, A.*: Methoden für die Erhebung und Bewertung der Libellenfauna (Insecta: Odonata): eine Arbeitsleitung (pp. 1-22); — Nachweis von *Lestes barbarus* (Fabricius) (Odonata, Zygoptera) in der Ost-Steiermark (Österreich) (pp. 23-26); — *Kofler, A.*: Nachtrag zur Libellenfauna Osttirols (Odonata) (pp. 27-31); — *Mungenast, F.*: Über das gehäufte Auftreten von *Sympetrum fonscolombii* (Selys, 1840) bei Imst, Nordtirol, im Frühsommer 1996 (pp. 32-36); — *Schweighofer, W.*: Hochgelegene Libellennachweise (Odonata) aus Niederösterreich (pp. 37-40). — A b s t r a c t s of papers presented at the Second Odonatological Symposium of the Alps-Adriatic Regional Community, Deutsch-Wagram nr Vienna, Austria, July 14-18, 1996: *Dell'Anna, L., C. Utzeri, E. De Matthaes & M. Cobolli*: Biological differentiation and reproductive isolation of syntopic central Italian populations of *Chalcolestes viridis* (Vander L.) and *C. parvidens* (Artobol.) (Zygoptera: Lestidae) (p. 41); — *Wildermuth, H.*: Niche overlap, niche segregation and habitat selection in *Somatochlora arctica* (Zett.) and *S. alpestris* (Sel.) in Switzerland (Anisoptera: Corduliidae) (p. 42); — *Burbach, K. & M. Winterholler*: The occurrence of the Vagrant Emperor (Hemianax ephippiger) in Middle Europe 1995 (p. 43); — *Lehmann, G.*: Gomphiden im Bergland: zum Vorkommen von *Gomphus vulgatissimus* und *Onychogomphus forcipatus* im Bezirk Kufstein, N-Tirol (pp. 43-44); — *Burbach, K. & M. Winterholler*: The Bavarian Dragonfly Atlas: conception, database and stand of working (p. 44); — *Bedjanič, M.*: The "dry season" aspect of the odonate fauna of Sri Lanka (p. 45); — *Müller, R. & M. Hämäläinen*: Philippinen, odonatologische Feldforschung im Tropenwald (p. 45); — *Arensberger, G. & P. Peitzner*: Libellendias ausgewählter europäischer Arten (pp. 45-46); — *Raab, R. & E. Chwala*: The Red List of dragonflies in Lower Austria (p. 46); — *Müller, R.*: Die Odonaten von Micronesien (Pazifik) (p. 46). — O t h e r communications: *Raab, R.*: Aktivitäten der



- ÖAL (pp. 47-50); – *Neuerscheinungen / Publikationshinweise* (p. 51); – *Beck, H. & R. Raab: Geschäftsbericht 1996 und 1997 der Österreichischen Arbeitsgemeinschaft Libellen*, ÖAL (p. 52).
- (12654) ANDRES, C., 1999. Entwicklung der Libellenfauna nach den Renaturierungsmassnahmen an der Liese bei Wadersloh-Diestedde. *Flora Fauna Kreis Warendorf* 9: 16-24. – (Vor der Laakenbreite 24a, D-37075 Göttingen).  
The recultivation of the R. Liese, Northrhine-Westphalia, Germany has taken place in winter 1995/96. The appreciable effects on the odon. fauna (species number and population strength) are described here in detail. The number of spp. has increased from the former 4 to 20 in 1997.
- (12655) ANDRES, J.A. & A. CORDERO, 1999. The inheritance of female colour morphs in the damselfly *Ceriatagrion tenellum* (Odonata, Coenagrionidae). *Hereditas* 82: 328-335. – (Depto Ecol. & Biol. Animal, Univ. Vigo, E.U.E.T. Forestal, Campus Universitario, ES-36005 Pontevedra).  
♀-limited polychromatism is found in many odon. spp. In *C. tenellum* one of the morphs (f. *erythrogastrum*) is red-coloured, like the conspecific ♂, whereas most ♀♀ are red and black (f. *typica*) or black (f. *melanogastrum*). Virgin ♀♀ were mated in the laboratory and their progeny reared (13 crosses). Results of these crosses indicate that colour morphs are controlled by one autosomal locus with ♀-limited expression. A second laboratory generation (2 crosses) confirmed this inheritance system. This locus has 3 alleles (1 per phenotype) and a hierarchy of dominance: *typica* > *melanogastrum* > *erythrogastrum*. The dominance relationships of andro/gynochrome alleles in polymorphic Zygopt. so far studied are discussed. The frequencies of ♀ morphs in natural populations are highly variable, but in all cases *typica* ♀ are the commonest.
- (12656) ARGIA. The news journal of the Dragonfly Society of the Americas, Vol. 11, No. 2 (15 June 1999). ISSN 1061-8503. – (c/o Dr & Mrs T.W. Donnelly, 2091 Partridge Lane, Binghamton, NY 13903, USA). [Signed articles:] *Hutchinson, R. & B. Ménard*: Odonatological news from Quebec, Canada: the marvelous world of Quebec dragonflies (pp. 3-8); – *Caldwell, B.A.*: *Archilestes grandis* (Odonata: Lestidae) from Georgia: new state record (pp. 9-10); – *Donnelly, N.*: A short Texas collecting trip (p. 10); – *Brunelle, P.-M.*: A course on larval damselflies and dragonflies of the Northeast (p. 11); – *Steffens, W.*: Deformed dragonflies: a clarification (p. 12); – *Behrstock, R.A., T.L. Eubanks & P. Miliotis*: Bar-sided damner, *Gynacantha mexicana* Selys, 1868 (Odonata: Aeshnidae), a new dragonfly for the U.S. (pp. 12-14); – *Daigle, J.J.*: Say's spiketail from Florida (p. 14); – *Williamson, S.*: Bittern catches dragonfly (p. 14); – *Goodwin, F.*: An on-going study of the relationship between ants, birds, and dragonflies during the phenomenon of swarms at Massachusetts Audubon Society's Ipswich River Wildlife Sanctuary (pp. 14-15); – *Paulson, D.*: Odonata gleanings: dragons eating dragons (pp. 15-16). – In addition to several meeting and book announcements, book reviews, requests from the readers, etc., the traditional web site review, *Treama*, was contributed by *N. Donnelly* (p. 20).
- (12657) The ASHTON SKIMMER. The newsletter of the National Dragonfly Museum. Not numbered and not dated (received 16 June 1999). – (c/o Natn Dragonfly Mus. at Ashton Mill, nr Oundle, Peterborough, PE8 5LZ, UK).  
A 2-page issue gives a summary of the 1998 activities of the Museum, and a review of the 1999 projects and events. These include the Museum's first Dragonfly Photography Competition (27 June-26 Sept.), a Dragonfly Study Weekend (17-18 July) and a lecture by Dr *N.W. Moore*, on "The conservation of dragonflies at home and abroad" (18 Sept.).
- (12658) ATROPOS ["the UK's premier journal for active Lepidoptera and Odonata enthusiasts"], No. 7 (Apr. 1999). – (36 Tinker Lane, Meltham, Huddersfield, W Yorks, HD7 3EX, UK).  
[Odon. articles:] *Colston, A.*: Site guide: Wicken Fen National Nature Reserve, Cambridgeshire (pp. 3-6; cf. *OA* 11870); – *Wasscher, M.*: Identification of Small red-eyed damselfly *Erythromma viridulum* (Charp.) (pp. 7-9); – *Shardlow, M.E.A.*: The RSPB and Odonata conservation (pp. 10-15); – *Geeson, J. & J. Geeson*: Our Mid-Norfolk garden (pp. 35-38); – *Parr, A.*: Odonata Records committee news (p. 51); – *Parslow, R.*: Colour changes in Tresco Green damner *Anax junius* (p. 54); – *Reeve, K. & P. Reeve*: Club-tailed dragonfly *Gomphus vulgatissimus* breeding in Warwickshire (pp. 55-56); – *Elkins, N.*: Transatlantic vagrancy (p. 58; with a postscript by *P. Davey*); – *Tunmore, M.*: Book review of the volume listed in *OA* 12590 (p. 61).

- (12659) BEDJANIĆ, M. & A. ŠALAMUN, 1999. Contribution to the knowledge of the odonate fauna of Sicily, with some additional data from Basilicata, southern Italy. *Opusc. zool. flumin.* 169: 1-14. – (First Author: Fram 117/a, SI-2313 Fram).  
An annotated list is presented of 26 spp. collected during 7/18-VIII-1996 at 16 localities in Sicily and Basilicata. The records of *Lestes v. virens*, *Aeshna mixta*, *A. cyanea*, *Onychogomphus uncatu*s and *Orthetrum trinacria* from Sicily and *O. f. forcipatus* from Basilicata are of special regional interest. The breeding of *O. uncatu*s and *A. cyanea* in Sicily could be confirmed for the first time. A list of 45 taxa known from the island with certainty is compiled and the late summer aspect of the fauna is briefly discussed.
- (12660) BLASCO-ZUMETA, J. & A. MELIC, 1999. Sintesis sobre la biocenosis de Los Monegros. *Boln Soc. ent. aragon.* 24: 29-48, with "Inventario provisional de la biodiversidad monegrina" on pp. 215-251. – (First Autor: cf. Hispanidad 8, ES-50750 Pina de Ebro, Zaragoza).  
Lists 16 odon. spp. from Los Monegros, Aragon, Spain. The complete regional bibliography is appended.
- (12661) BORCHERS, R., 1999. *Untersuchungen zur Autökologie von Aeshna subarctica elisabethae Djakonov, 1922*. DiplArb. Zool. Inst. Univ. Hamburg. iv+86 pp., 12 pp. "Anhang" excl. – Price: DEM 35.- net, postage excl. – (Orders to the Author: Rotdornallee 18, D-29640 Schneverdingen).  
The study was conducted (1998) at Schwarzes Moor nr Schneverdingen, Lower Saxony, Germany, covering the aspects of habitat requirements, larval & adult biology, and population ecology. The results are discussed in terms of the previously published evidence. Of particular interest are the features of larval biology, compared with those in the allied *A. juncea*.
- (12662) BROOKS, S.J., 1999. [Book review] World catalogue of Odonata, by H. Steinmann. *Ent. mon. Mag.* 135(1616/1619): 58. – (Dept Ent., Nat. Hist. Mus., Cromwell Rd, London, SW7 5BD, UK).  
A critical review of the work listed in OA 11618, with reference to some taxa described by the reviewer.
- (12663) BUCZYŃSKI, P. & S. CZACHOROWSKI, 1999. Nowe stanowisko *Sympetrum fonscolombii* (Selys, 1840) (Odonata: Libellulidae) na Pojezierzu Pomorskim – New record of *Sympetrum fonscolombii* (Selys, 1840) (Odonata: Libellulidae) from the Pomeranian Lakeland. *Wiad. ent.* 18(1): 56. – (Pol., with Engl. title; a Germ. translation is available from the first Author). – (First Author: Inst. Zool., UMCS, ul. Akademicka 19, PO-20-033 Lublin).  
So far this mediterranean immigrant sp. was recorded from 16 localities in Poland, incl. 2 from the northern parts. A brief review is presented, and the recent northward trend of its migrations in Poland is emphasized.
- (12664) *BULLETIN OF AMERICAN ODONATOLOGY*, Vol. 5, No. 4 (30 July 1999). ISSN 1061-3781. – (c/o Dr & Mrs N. Donnelly, 2091 Partridge Lane, Binghamton, NY 13903, USA).  
*Wagner, D.L. & M.C. Thomas*: The Odonata fauna of Connecticut (59-85; with reference to P. Garman's inventory [1927, *Bull. Conn. St. geol. nat. Hist. Surv.* 39: 331 pp.], 35 spp. and 471 county records are added, bringing the total number to 147 spp. documented from the state.
- (12665) CHENG, H.-X., 1999. A rare phenomenon of colonial flight of *Sympetrum imitans*. *Ent. Knowledge / Kunchong zhishi* 36(1): 61. – (Chin., with Engl. title in contents table). – (Author's address unknown). [Abstract not available.]
- (12666) *DARTER*. Newsletter of the Dragonfly Recording Network, No. 19 (Spring 1999). – (Editorial & Publisher's addresses not stated; probably c/o Dr P. Harding, Biol. Records Cent., Monks Wood, Abbots Ripton, Huntingdon, Cambs, PE17 2LS, UK; – distributed by BDS; c/o Dr W.H. Wain, "The Haywain", Hollywater Rd, Bordon, Hants, GU35 0AD, UK).  
[The newsletter commenced publication in 1977, and has changed its name several times, viz. *Odonata Mapping Scheme Newsletter* (Nos 1-3; 1977-1979), – *Odonata Recording Scheme Newsletter* (Nos 4-16; 1980-1993; some issues dated but not numbered); – and *Dragonfly Recorder* (Nos 17-18; 1997-1998).] – **C o n t e n t s**: *Editorial* (p. 1; anonymous); – *Moore, N.*: Under threat: Norfolk Hawker (*Aeshna isosceles*) (p. 2); – *Johnson, I.*: Dragonfly recording and conservation: a personal view (p. 3); – *Harding, P.*: Dragonfly recording in the wider context (p. 4); – *Parr, A.*: Migrant Dragonfly Project (p. 5); – *Cham, S. & B. Wain*: Help for users of DARTER software (p. 6); – *Cham, S.*: News from East Anglia (p. 6); – *Clarke, D.*: News from North England (p. 7); – *Averill, M.*: News from the Midlands (p. 8); – *Jones, S.*: News from Cornwall (pp. 8-9); – *Taylor, P.*: News from Norfolk (p. 10); – *Cham, S.*: Using DARTER and

- DMAP (pp. 10-11); — *Perrin, V.*: Knowing our key sites (pp. 12-13); — *Smith, B.*: News from Scotland (p. 14); — *Smith, I.D.*: Recording in Wales: the way forward! (p. 15); — *Contacts* (p. 16; address list).
- (12667) DE BOER, H., 1999. Libellenlarven en troebelheid — [Dragonfly larvae and turbidity]. *Natuur hist. Infobull.* 5: 23, 27. (Dutch). — (Author's address not stated).  
A brief outline of a research project.
- (12668) DE GROOT, T., 1999. De libellen van vijf laagveen moerassen. — The dragonflies of five peat mares. *Levende Nat.* 100(4): 112-117. (Dutch, with Engl. s.). — (Vereniging Natuurmonumenten, Postbus 9955, NL-1243 ZS 's-Graveland).  
Based mainly on the work reported in OA 10801, 11441 and 11960, the paper deals with differences and similarities between odon. populations of 5 selected lowland moors in the Netherlands. Since in most parts of W Europe 6 out of 7 fen odon. spp. are threatened, the importance of conservation of the Netherlands habitats is emphasized.
- (12669) ERJAVECIA. [Newsletter of the Slovene Odonatological Society], Ljubljana, No. 7 (30 Apr. 1999). ISSN 1408-8185. (Slovene). — (c/o M. Bedjanič, Fram 117/a, SI-2313 Fram).  
Feature article, by *M. Bedjanič* (pp. 1-3), deals with Sir Humphrey Davy's (1778-1829) frequent visits to Slovenia and with his dragonfly work. The rest of the 20 pp. issue is made up by various articles from the society's life, Nos 247-280 are added to the Slovene odonatol. bibliography (pp. 17-20).
- (12670) FRANKOVIĆ, M., [Ed.], 1999. *Symposium book of the Third Odonatological Symposium of the Alps-Adriatic Community, Starigrad-Paklenica, Croatia, 17-25 July 1998*. Franković, Zagreb. 26 pp. — (Distributed by the Editor: Barutanski breg 30, CRO-10000 Zagreb, Croatia).  
Published in May 1999, the booklet contains abstracts of the presented papers, site descriptions and species lists of the localities visited, and the addresses of the participants. — **A b s t r a c t s**: *Bedjanič, M.*: Dragonfly observations from southern Borneo (p. 3); — *Burbach, K.*: Dragonflies in Bavaria (p. 4); — *Hill, B. B. Beinlich & H. Plachter*: Habitatpräferenz von *Lestes barbarus* (Fabricius, 1798) auf einer Huteweide des Naturparks Lonjsko Polje, Kroatien (p. 5); — *Inoue, K.*: Establishment of the dragonflies at newly prepared "Dragonfly Ponds" in Japan (p. 6); — *Pirnat, A.*: Fauna and ecology of dragonflies (Odonata) at Ljubljana Moor (p. 7); — *Tagliapietra, V. & D. Zanocco*: Dragonflies of the Trentino Red List of insects (Italian Alps) (p. 8); — *Utzeri, C., A. Cordero, E. Goretti, G. La Porta, L. Mancini, M. Mei, S. Santolamazza Carbone, A. Speziale, F. Terzani & M.V. Di Giovanni*: Preliminary information on the distribution, ecology and behaviour of *Somatochlora meridionalis* Nielsen, 1935 in central Italy (p. 9); — *Franković, M. & M. Bedjanič*: Island of Pag: dragonflies and their habitats (p. 10). — **F i e l d t r i p s** (with species lists): National Park Plitvice Lakes (p. 11); — Paklenica National Park (p. 12); — Island of Pag (p. 13); — Krupa River (p. 14); Vransko Lake (p. 15); — Brackish marshes in coastal part of Starigrad-Paklenica (p. 16); — Rivulet Jaruga near Rožanac (p. 16); — Salines by Nin (p. 17); — Pond in Jovići (p. 17). — *List of dragonflies* recorded during the field trips (pp. 18-19; 43 spp.). — *Participants* (pp. 18-19; 19 addresses).
- (12671) GERKEN, B. & K. STERNBERG, 1999. *Die Exuvien europäischer Libellen (Insecta, Odonata) — The exuviae of European dragonflies (Insecta, Odonata)*. Huxaria, Höxter. viii+354 pp. ISBN 3-9805700-4-5. (Softcover, 21.0x29.5 cm). — Price: DEM 38.50 net, postage extra. (Bilingual: Germ./Engl.). — (Orders to: Abt. Höxter Lehrgeb. Tierökol., Univ. Paderborn, An der Wilhelmshöhe 44, D-37671 Höxter).  
The work covers the entire European fauna and includes over 400 structural figs, almost all are original. The general part (pp. 1-31) consists of the following chapters: "Collecting of exuviae as a contribution of basic research of ecology and natural history and as a help in nature conservation", "Introduction", "Determination of exuviae", "Sampling, conservation and preparation of exuviae", and "Where we find exuviae". The chapters of the second and main part (pp. 32-346) are: "Characteristics for the classification of odonate exuviae", "Glossary", "Definition of the technical terms", "Specific termini English-German", "List of species" (= 109 spp., plus those which cannot be identified with this key, or the identification of which is possible only in the regions where they do not co-occur with similar spp.), and "Identification key" (pp. 63-346). A comprehensive bibliography is added (pp. 348-354). — This is the first Engl. work of this scope. It is concisely styled and editorially well organized (left pp.: upper part Germ., lower part Engl.; right pp.: figs, with bilingual captions), and it will definitely

- serve as an indispensable identification tool. Its price is certainly very moderate. — The large size and the poor binding are likely to appear inconvenient in daily use. The wording of chapter titles in the contents table is not always identical to that in the text, and no sp. name appears in Fig. 180, but these are negligible shortcomings, affecting in no way the quality of the work.
- (12672) GOCKING, C., 1999. Zum Vorkommen der Helm-Azurjungfer (*Coenagrion mercuriale*) in der Emsaue bei Warendorf. *Flora Fauna Kreis Warendorf* 9: 69-70. — (Zum Hiltruper See 9, D-48165 Münster). The occurrence of *Coenagrion mercuriale* at the Ems R. nr Warendorf, Northrhine-Westphalia, Germany is brought on record, and the strength of its population is quantitatively assessed.
- (12673) GOMPHUS. Mededelingsblad van de belgische libellenonderzoekers — Bulletin de liaison des odonatologues belges, Vol. 15, No. 2 (June 1999). (Dutch & Fr., with Engl., Fr. & Dutch s's). — c/o G. de Knijf, Ploegstraat 33, B-9050 Gent. Goffart, P./Tailly, M.: Editorial (pp. 61-62); — Decocq, O. & J. Piern: Des larves de *Cordulegaster boltoni* (Insecta: Odonata) sous épicea (*Picea abies*) dans le Parc naturel Viroin-Hermeton (pp. 63-68); — Vanderhaeghe, F.: Present distribution and status of *Coenagrion scitulum* in Belgium and northern France (pp. 69-85); — Goffart, P.: Compte-rendu des observations d'espèces prioritaires d'odonates en Wallonie durant le saison 1998, dans le cadre du programme d'Inventaire et Surveillance de la Biodiversité (pp. 86-95); — Compte-rendu de la journée de rencontre et d'étude sur le thème "Libellules de Belgique", 14 mars 1999, à Louvain-la-Neuve (pp. 96-98); — Compte-rendu de l'excursion aux mares de Ben-Ahin (vallée de la Meuse) du 28 juin 1997 (pp. 98-99). — Various announcements (pp. 100-105) and the 1999 field trip program (pp. 106-108) conclude the issue.
- (12674) HÄMÄLÄINEN, M. & A. PINRATANA, 1999. *Atlas of the dragonflies of Thailand: distribution maps by provinces*. Brothers of St Gabriel in Thailand, Bangkok. vi+176 pp., 28 col. pls incl. ISBN 974-87004-5-3. (Hardcover, 19.5x26.5 cm). — Price: US\$ 30.-- net, postage excl. — (Orders to: Bro. Amnuay Pinratana, St Gabriel's Coll., 565 Samsen Rd, Bangkok-10300, Thailand). After Japan (cf. OA 5245), this is the second national odon. atlas of an Asiatic country. The book provides an updated checklist and distribution maps of the 315 spp. known from Thailand up to 1 Apr. 1998. *Indocypha leucoura* Asahina, 1985 is synonymized with *I. vittata* (Selys, 1897), and *Drepanosticta doisuthepensis* Asahina, 1984 with *D. anascephala* Fraser, 1933. The annotations on the maps include some bibliographic references, and brief statements on distribution, status and adult flight season of the respective sp. In a separate chapter, authored by the first author, additional taxonomic and faunistic notes are provided for 47 spp. The bibliography contains 125 titles. The value of the book is significantly enhanced by 153 col. portraits of 124 spp., most of them taken under natural conditions, many representing taxa that have not been photographed earlier, and some of which were contributed by T.W. Donnelly, P. Ek-Amnuay, R.W. Garrison, J. Nabhitabhata, H. Olsvik and K.-i. Watanabe. The book is very well organized, excellently produced, and the reproduction of most photographs, when from original slides rather than from copies, is outstanding. — The exploration of the odon. fauna of Thailand commenced in 1877, with the description of *Stenobasis* (now in *Archibasis*) *oscillans*, by Selys. E.B. Williamson, F.F. Laidlaw, S. Asahina, and M. Hämäläinen are among the great names of Thai odonatology. A. Pinratana has the largest Thai collection, and is the instigator and the organizer of almost all odonatological research and publication activities that are taking place in Thailand since about 20 yr.
- (12675) HOFFMANN, F. & A. BLANKENA, 1999. Sprengen: beken op de oost-Veluw. — ["Sprengen": streams in the Oost-Veluwe]. *Amoeba, Amst.* 73(2): 68-71. (Dutch). — (First Author: Vlasstraat 28a, NL-9712 KV Groningen). The hydrology, flora and fauna of the Oost-Veluwe streams, the Netherlands, are briefly described, and their state of conservation is outlined. *Calopteryx splendens* is the only odon. sp. mentioned.
- (12676) INOUE, K. & K. TANI, 1999. *Tombo no subete — All about dragonflies*. Tombow, Osaka. ii+152 pp. ISBN 4-88716-112-3. Softcover, 25.5x18.0 cm. — Price: ¥ 3675.-- net. (Jap., with taxonomic nomenclature, Engl. chapter titles & fig. captions). — (Outside Japan available from the Eds of *Odonatologica*, P.O. Box 256, NL-3720 AG Bilthoven, at NLG 75.-- net). The book is addressed at the non-professional field worker, providing a considerable volume of well-organized original information on the topics that will be of interest to professional hydrobiologists, ecologists

- and conservationists. Its emphasis is on habitat ecology and odonate community structures, particularly also in various types of man-made and semi-natural habitats. It is not a taxonomic work, but it includes a checklist of the Japanese taxa, field photographs of many of them, pictorial keys for species separation in some of the more complicated genera (e.g. *Cercion*, *Ischnura*, *Trigomphus*, *Sympetrum*, etc.), detailed instructions for (Japanese style) adult and larval specimen preparation, etc. — Over 400 illustrations (of which ca 250 col. photographs) are enhancing the value and the attraction of this beautifully produced book.
- (12677) JAKOB, C. & F. SUHLING, 1999. Risky times? Mortality during emergence in two species of dragonflies (Odonata: Gomphidae, Libellulidae). *Aquat. Insects* 21(1): 1-10. — (Second author: Zool. Inst., Techn. Univ., Fasanenstr. 3, D-38092 Braunschweig). Mortality during emergence of *Onychogomphus uncatius* and *Orthetrum coerulescens* was studied at the Canal de Vergière, nr Arles, S France. Overall mortality was 5.2% (n=1901) and 5.7% (n=611), resp. Predation was low in both spp. The prime cause of mortality was incomplete ecdysis resulting from different factors among which heavy wind was the most important in *O. coerulescens* and lack of suitable emergence supports in *O. uncatius*. Besides data on mortality the emergence curves of both spp. are provided.
- (12678) JOHANSSON, F. & L. ROWE, 1999. Life history and behavioral responses to time constraints in a damselfly. *Ecology* 80(4): 1242-1252. — (Second Author: Dept Zool., Univ. Toronto, Toronto, ON, M5S 1A1, CA). Time constraints, imposed by seasonality, are common to life histories. Recent theory of evolutionary ecology predicts independent behavioural and life history responses to such constraints, but it remains largely untested. — In 2 experiments on *Lestes* congener, individual's perception of proximity to a time constraint was experimentally altered, in order to ascertain whether their behaviour and life history respond in the directions predicted by theory. Larval perception of their position in the season was altered with light regime. In one group, larvae were hatched from winter diapausing eggs in a light regime that mimics a relatively early time in the season. In the other group, larvae were hatched in a light regime that mimics a late time in the season. In the late (time-constrained) group, larvae would have very little time to complete development and reach a large size so that they could attain their full reproductive potential prior to winter. As predicted, time-constrained larvae increased their activity rates and accelerated development rate, and thereby matured at a significantly earlier age and smaller size. The analysis demonstrates that the life history responses did not result from the behavioural responses, i.e. the 2 response sets were independent.
- (12679) JONES, C.D., 1999. Dragonflies and damselflies (Odonata) of Peterborough county. *In*: P.S. Burke, C.D. Jones, J.M. Line, M.J. Oldham & P.J. Sorriall, 1998 Peterborough county natural history summary, pp. 153-179, Peterborough Field Naturalists, Natural Heritage Information Cent. & Trent Univ., Peterborough/ON. — (Author: Algonquin Prov. Park, Box 219, Whitney, ON, K0J 2M0, CA; — Copies of the book [219 pp.] available from: Peterborough Fld Nat., Box 1532, Peterborough, ON, K9J 7H7, CA). This is a compilation of all the known odon. records from Peterborough Co., Ontario, Canada, and it is meant as a baseline on the local distribution and flight periods. Information on pre-1998 records comes largely from the Ontario Odonata Database, created and maintained by the Natural Heritage Information Centre. So far 84 spp. were recorded. The general habitat, localities, and the dates of the first and last seasonal adult record are stated.
- (12680) JONES, C.D., 1999. The 1998 Algonquin Odonata count. *Ontario Insects* 4(2): 38-39. — (Algonquin Prov. Park, P.O. Box 219, Whitney, ON, K0J 2M0, CA). The count was conducted on 27 June, within a 15 mi diameter, by 16 observers. 1546 individuals of 55 spp. were sighted. A checklist is provided. — Algonquin, Ontario, Canada.
- (12681) JOOSSE, R., 1999. *Jaaroverzicht 1997* — [Annual review 1997]. Vlinder- en Libellenwerkgroep Zeeland, Oost-Souburg. iv+94 pp. (Dutch). — (c/o Grote Abeele 40, NL-4388 VW Oost-Souburg). A comprehensive review of the 1997 odon. occurrence in the province of Zeeland, the Netherlands appears on pp. 79-93.
- (12682) *JOURNAL OF THE BRITISH DRAGONFLY SOCIETY*, Vol. 15, No. 1 (Apr. 1999). — (c/o Dr W.H. Wain, Haywain, Hollywater Rd, Bordon, Hants, GU35 0AD, UK). *Smith, E.M. & R.W.J. Smith*: The status of *Coenagrion hastulatum* (Charpentier) in Scotland, with notes on

- larval sampling (pp. 1-9); – *Phillips, J. & V. Phillips*: A sighting of *Coenagrion pulchellum* (Vander Linden) in Gloucestershire (pp. 10-11); – *Andrews, S.J.*: Observations on the use of Yellow Flag (*Iris pseudacorus*) as a support for emerging zygopteran larvae (pp. 12-17); – *Beynon, T.G.*: An unusual mismatch (p. 17); – *Clements, D.K.*: The Hornet Robberfly *Asilus crabroniformis* L. (Diptera, Asilidae): interactions with Odonata (pp. 18-19); – *Pedersen, H.*: Cannibalism in dragonflies exemplified by the species *Anax imperator* Leach and *A. parthenope* (Sélys) (p. 20); – *Pellow, K.*: Common Green Darner *Anax junius* (Drury) in Cornwall and Isles of Scilly: the first British and European records (pp. 21-22); – Some observations of a breeding population of Red-veined Darter *Sympetrum fonscolombei* (Sélys) in Cornwall during 1998 (pp. 23-30); – *Fox, T.*: Book review (pp. 31-32; volume described in OA 12590).
- (12683) *KARUBE, H.*, 1999. A new species of the genus *Petaliaeschna* (Odonata, Aeschnidae) from northern Vietnam. *Gekkan-Mushi* 338: 6-7. (Jap. & Engl.). – (Kanagawa Prefectural Mus. Nat. Hist., Iryuda 499, Odawara, 250-0031, JA).  
*P. flavipes* sp. n. is described and illustrated from 2 ♂. Holotype ♂: Mt Piaoac, Cao Bang prov., 26-V-1998; deposited at the Author's institution. It is similar to *P. corneliae* Asah., but easily distinguishable by head marking, body colouration and by the shape and colouration of caudal appendages.
- (12684) *KIRFEL, G. & H. KOMNICK*, 1999. Differential absorption and esterification of dietary long-chain fatty acids by larvae of the dragonfly *Aeshna cyanea*. *Archs Biochem. Physiol.* 40(4): 183-193. – (Second Author: Inst. Cell Biol., Univ. Bonn, Ulrich-Haberland-Str. 61a, D-55121 Bonn).  
 In order to evaluate whether dietary long-chain fatty acids were differentially absorbed, larvae received 5 µl oral doses containing combinations of 2 radiolabeled fatty acids at nearly equal radioactive and nmolar concentrations: (1) <sup>3</sup>H-oleic and <sup>14</sup>C-palmitic acids; (2) <sup>3</sup>H-oleic and <sup>14</sup>C-stearic acids; and (3) <sup>3</sup>H-palmitic and <sup>14</sup>C-stearic acids. After 3h or 1 day, hemolymph samples, midgut tissue, midgut contents and fat body tissue were collected and assayed for labeled fatty acids. The <sup>3</sup>H/<sup>14</sup>C ratios indicated that there was a preference for absorption of the monounsaturated oleic acid over both saturated palmitic and stearic acids and that the shorter palmitic acid was absorbed at a higher rate than the longer stearic acid. There were also differences in the <sup>3</sup>H/<sup>14</sup>C ratios of the various lipid classes of the midgut wall, hemolymph, and fat body that reflected differential esterifications and transport of these fatty acids.
- (12685) *KONING, F.*, 1999. *KNNV-Libellenwerkgroep Zuid-Kennemerland*. – [*Zuid-Kennemerland Dragonfly Group of the Royal Netherlands Natural History Society*]. LWZK, Heemstede. 4 pp. (Dutch). – (Hobbemastraat 37, NL-2102 BJ Heemstede).  
 Informative brochure, outlining the set-up and the operation of the Group, founded 10 Nov. 1997. For its 1998 report see OA 12710. Geographically, its activities are restricted to the region W of the Amsterdam harbour and N of Hillegom; – the Netherlands.
- (12686) *La LETTRE DES SOCIÉTAIRES*, Société Française d'Odonatologie, No. 17 (15 March 1999), No. 18 (1 June 1999). – (c/o J.-L. Dommange, 7 rue Lamartine, F-78390 Bois-d'Arcy).  
 [No. 17:] Aside of the Editorial (pp. 1-2, by J.-L. Dommange), the issue contains 5 pp. of notes and announcements, under 12 headings. – [No. 18:] Contains Minutes of the 1999 SFO Plenary Business Meeting. The Society has at present 351 members, 24 of whom have joined in 1999. The 1998 Balance Account shows a very minor deficit. The 2000 *Martinia* subscription was fixed at FRF 220.-- net. An extra charge of FRF 20.-- is required for eurocheque and international postal money order remittances, and FRF 100.-- for bank charges.
- (12687) *LEUNG, B., R.L. BAKER & M.R. FORBES*, 1999. Grooming decisions by damselflies, age-specific colonisation by water mites, and the probability of successful parasitism. *Int. J. Parasitol.* 29(3): 397-402. – (Second Author: Dept Zool., Univ. Toronto, Mississauga, ON, L5L 1C6, CA).  
 It was examined whether *Ichnura verticalis* in different stages of development were differentially susceptible to parasitism by larval *Arrenurus pseudosuperior*. The mites were successful in reaching the parasitic phase more often if they colonised hosts closer to emergence. Thus, it was predicted that more mites should colonise damselflies closer to emergence, and damselflies closer to emergence should spend more time defending against mites. It was found, however, that mites colonised damselflies closer to emergence in 1 of 2 experiments, and that damselflies in different stages of development did not differ in time spent defending against mites.

- (12688) *LIBELLULA*. Mitteilungsblatt der Gesellschaft deutschsprachiger Odonatologen (GdO), Vol. 18, No. 1/2 (May 1999). — (c/o Mrs U. Krüner, Gelderner Str. 39, D-41189 Mönchengladbach).  
*Günther, A. & R. Mauersberger*: Verhaltensbeobachtungen an *Anax ephippiger* (Burmeister) 1995/1996 in Brandenburg (Anisoptera: Aeshnidae) (pp. 1-14); — *Leipelt, K.G., I. Jökel, T. Schrimpf, C. Schütte & F. Suhling*: Untersuchungen zur Habitatwahl der Larven von *Macromia splendens* (Pictet) (Anisoptera: Macro-miidae) (pp. 15-30); — *Jödicke, R.*: Libellenbeobachtungen in Podlasie, Nordost-Polen (pp. 31-48); — *Fuhrmann, K.*: Libellenbeobachtungen in Nordvorpommern und angrenzenden Gebieten (pp. 49-53); — *Blischke, H.*: Schlupf von *Lestes viridis* (Vander Linden) abseits vom Gewässer (Zygoptera: Lestidae) (pp. 55-58); — *Reder, G.*: Wolfsspinnen (Araneae: Lycosidae) als Beutegreifer einer schlüpfenden Grosslibelle (Anisoptera: Gomphidae) (pp. 59-62); — *Hoess, R.*: Erstnachweis einer zweiten Jahresgeneration von *Ischnura elegans* (Vander Linden) in der Schweiz (Zygoptera: Coenagrionidae) (pp. 63-68); — *Müller, J.*: *Ophiogomphus cecilia* (Fourcroy) in der Donau bei Deggendorf, Niederbayern (Anisoptera: Gomphidae) (pp. 69-70); — *Krawutschke, A. & M. Kruse*: *Gomphus flavipes* (Charpentier) an der Unteren Havel (Anisoptera: Gomphidae) (pp. 71-77); — *Oehme, H.*: Jagderfolg und Jagdtaktik bei *Sympetrum striolatum* (Charpentier) (Anisoptera: Libellulidae) (pp. 79-87); — *Bertram, G. & M. Haacks*: Beobachtungen von windverdrifteten Libellen auf der Kurischen Nehrung im September 1998 (pp. 89-94); — *Arlt, J.*: Entwicklungsnachweis von *Pantala flavescens* (Fabricius) in der Türkei (Anisoptera: Libellulidae) (pp. 95-96); — *Weihrauch, F.*: Larven von *Gomphus vulgatissimus* (L.) als Substrat der Wandermuschel *Dreissena polymorpha* (Pallas) (Anisoptera: Gomphidae; Bivalvia: Dreissenidae) (pp. 97-102); — *Rehfeldt, G.*: Massenentwicklung von *Sympetrum fonscolombii* (Selys) in Südfrankreich 1996 (Anisoptera: Libellulidae) (pp. 103-106).
- (12689) *LINDENIA*. Notiziario dell'Ufficio nazionale italiano della Società odonatologica internazionale, Napoli, No. 30 (21 June 1999). — (c/o Dr C. D'Antonio, Via A. Falcone 386/b, I-80127 Napoli).  
*D'Antonio, C.*: Appuntamenti (pp. 129-130); — [Book review:] *G. Jacquemin & J.-P. Boudot*, Les libellules (odonates) du Maroc (p. 130); — Nota sulla presenza degli odonati nelle province italiane (pp. 130-132); — Checklist delle "libellule" nella . . . letteratura italiana, 2 (p. 132).
- (12690) *MARTINIA*. Revue scientifique de la Société Française d'Odonatologie, Vol. 15, No. 1 (March 1999), No. 2 (June 1999). — (c/o J.-L. Dommange, 7 rue Lamartine, F-78390 Bois-d'Arcy).  
 [No. 1:] *Klein, J.-P. & A. Vanderpoorten*: Etude écosystématique d'un gravière de l'ancien lit majeur du Rhin (Krafft-Erstein, Bas-Rhin, France) (pp. 3-13); — *Jolivet, S., F. Vaillant & X. Gruwier*: Développement larvaire de *Sympetrum fonscolombii* (Sély, 1840) constant en Ile-de-France (p. 14); — *Lecomte, T.*: Les odonates du Marais Vernier (département de l'Eure) (pp. 15-22); — *Bouguessa, S., L. Bouguessa, H. Bouneb & Z. Khelifa*: Les odonates zygoptères de l'Oued de la Meskiana (Algérie): premier bilan des observations (p. 22); — *Meurgey, F.*: Quelques observations sur les émergences d'odonates sur les ponts d'une rivière (département de Charente-Maritime) (pp. 23-29); — *d'Aguilar, J.*: Les descriptions des odonates d'Europe, 1: les espèces linnéennes (pp. 30-40). — [No. 2:] *Papazian, M.*: Odonates nouveaux pour la Guyane Française (Odonata, Libellulidae) (pp. 43-45); — *Jourde P. & J.-M. Thirion*: Nouvelles mentions d'*Hemianax ephippiger* (Burmeister, 1839) et données précoces pour quelques odonates en Charente-Maritime (p. 46); — *Brugiere, D.*: Pré-inventaire des odonates du département de la Loire (pp. 47-53); — *Boudot, J.-P.*: Rectification à l'article intitulé: Redécouverte de *Leucorrhinia rubicunda* (L., 1758) en France, par L. Gavory & J.-L. Dommange (*Martinia* 14: 47-52) (p. 54); — *d'Aguilar, J.*: Les descriptions originales des odonates d'Europe, 2: les espèces et les genres de Fabricius (pp. 55-68).
- (12691) MITRA, T.R., 1999. Progress of studies on dragonflies and damselflies (Insecta: Odonata) of India in the post independence period (1948-1998). *Abstr. Pap. natn. Symp. 50 Yrs Zool.*, Calcutta, pp. 47-48 [abstract only]. — (18/1 Dakshin Para Rd, Calcutta-700028, India).  
 The main publications on cytology, taxonomy, adult morphology, adult ecology and economic importance, larval morphology and ecology, neuroendocrinology, and biogeography are listed.
- (12692) MONNERAT, C., 1999. Premières données de *Gomphus vulgatissimus* L. et *Ophiogomphus cecilia* (Fourcroy) (Odonata, Anisoptera) pour les cantons du Jura et de Bâle-Campagne et statut régional des autres espèces de Gomphidae. *Bull. romand Ent.* 17(1): 21-

- 38. (With Engl. s.). — (Lab. Phanérogamie, Univ. Neuchâtel, rue Emile-Argand 11, CH-2007 Neuchâtel). Based on the 1993-1998 evidence, Swiss localities of *Gomphus pulchellus*, *G. vulgatissimus*, *Onychogomphus forcipatus* and *Ophiogomphus cecilia* are mapped. *G. vulgatissimus* and *O. cecilia* are for the first time reported from the cantons Basel-Land and Jura.
- (12693) NELSON, B., 1999. The status and habitat of the Irish damselfly *Coenagrion lunulatum* (Charpentier) (Odonata) in Northern Ireland. *Ent. mon. Mag.* 135(1616/1619): 59-68. — (Zool. Dept, Ulster Mus., Bot. Gardens, Belfast BT9 5AB, UK).  
The sp. is reported from 23 sites, of which 17 can be regarded as definite, but only 2 colonies support large numbers. The colonies are found on mesotrophic lakes and large bog pools. Habitat change caused by eutrophication is seen as the major threat to the sp.
- (12694) NEWSLETTER OF THE BRITISH DRAGONFLY SOCIETY, No. 35 (Spring 1999). — (c/o S. Henson, 10 Shotesham Rd, Poringland, Norwich, NR14 7LE, UK).  
On 20 pp., the text is organised under the following (mostly standard) headings: "From the Editor" (p. 1; by S. Henson), — "From the President" (pp. 2-4; by A. McGeeney), — "BDS field meetings & courses for 1999" (pp. 4-6; by D. Clarke), — "1998 Members' Day" (pp. 6-7; by P. Mill), — "BDS on the World Wide Web" (pp. 7-8; by G. Mahoney), — "Grants for young odonatists" (p. 8; by B. Wain), — "Requests" (pp. 8-10; by various authors), — "News from the Dragonfly Conservation Group" (pp. 10-11; by I. Johnson), — "Research & conservation news" (pp. 11-12; from various published sources, with precise bibliographic references), — "First and last dates for 1998" (pp. 12-14; by S. Henson, mostly Engl. species names), — "Short notes": *Leysdon, O.*: An influx of red-veined darters at Dungeness RSPB reserve in 1998 (p. 14), — "Your view, an open forum for BDS members" (p. 15; by P. Belden), — "Recently published" (pp. 15-16; by B. Wain), — "Noticeboard" (pp. 16-17), — "BDS business" (pp. 17-20; by B. Wain & H. Wain). — J. Silsby contributed an informative note on the Worldwide Dragonfly Association (p. 20).
- (12695) NIEUWSBRIEF VAN DE NEDERLANDSE VERENIGING VOOR LIBELLENSTUDIE, Vol. 3, No. 2 (June 1999). (Dutch). — (c/o NVL, Muddegoorn 78, NL-9403 NK Assen).  
On a single page, it only contains a *Brachytron* call for papers, and an appeal to the membership for assistance with texts for, and in editorial, production and management matters of the newsletter.
- (12696) NORDISK ODONATOLOGISK FORUM NYHETSREVEJ — NORDIC ODONATOLOGICAL SOCIETY NEWSLETTER, Vol. 5, No. 1 (July 1999). (In Nordic languages, mostly with Engl. s's). — (c/o B.P. Løfall, Aslivn. 20B, N-1890 Rakkestad).  
*Nielsen, O.F.*: Dragonfly news from Denmark 1998 (p. 3); — *Johansson, F. & T. Ivarsson*: The distribution of darter dragonflies (Sympetrum: Odonata) in central Norrland, Sweden (pp. 4-5); — *Olsvik, H.*: From the 4th Nordic Odonatological Meeting at Konnevesi, Finland, 26-28 June 1998 (p. 6); — *Olsvik, H. & O.F. Nielsen*: Sympetrum "nigrescens" Lucas, 1912 in Denmark (p. 7); — *Sahlen, G.*: Det andre WDA (World Dragonfly Association) internasjonale symposium i odonatologi i Sverige i 2001 (p. 8); — *Olsvik, H.*: Om larve-/exuvia-kjennetegn på *Somatochlora arctica* (p. 8); — [Book review:] O.F. Nielsen, De danske guldsmede (p. 9); — Proposed regional red lists for Odonata (pp. 10-11); — *Pedersen, H.*: Records of rare and new dragonfly species in Denmark 1997 (pp. 14-15); — *Olsvik, H.*: Odonata in Aure (p. 16); — Welcome to the 5th Annual Summer Meeting of the Nordic Odonatological Society, at Aure, Nordmoere, central Norway, 6-8 August 1999 (p. 17); — Odonata impressions from Minnesota (pp. 18-19). — The issue also contains 14 minor, anonymous notes (pp. 12-13) and the 1999 mailing list (p. 20).
- (12697) ODONATOLOGICAL ABSTRACT SERVICE, No. 4 — (June 1999). — (c/o J. Silsby, 1 Haydn Ave, Purley, Surrey, CR8 4AG, UK).  
Abstracts Nos 503-785, on 32 pp., covering 1997-1999.
- (12698) PAINTER, D., 1999. Macroinvertebrate distributions and the conservation value of aquatic Coleoptera, Mollusca and Odonata in the ditches of traditionally managed and grazing fen at Wicken Fen, UK. *J. appl. Ecol.* 36(1): 33-48. — (Aquatic Ecol. Gr., Dept Zool., Univ. Cambridge, Downing St., Cambridge, CB2 3EJ, UK).  
Water-filled ditches are an important ecological feature of lowland Britain. Originally dug to facilitate wetland drainage, ditches often provide refuges for aquatic flora and fauna of high conservation value. The ditches, ponds and major waterways of a tradi-



- tionally managed undrained fen and the ditches of a previously drained cattle-grazed fen meadow were sampled at Wicken Fen National Nature Reserve for Coleoptera, Mollusca and Odon. (10 spp.), and for physical, chemical and biological variables. Multivariate analysis showed a clear division between ditches on the 2 fens, and between larger and smaller waterbodies. Individual ditches possessed distinctive faunas. Ditch age and bank profile were important factors influencing faunal species composition. Invertebrate distributions were shown to be significantly correlated with macrophyte distribution. Waterbodies were ranked in terms of their species quality, using a point-scoring system; there was no correlation between rankings for the 3 invertebrate groups; only ditch age and detritus levels were correlated with species quality score (for Coleoptera). Ditch management recommendations are discussed in the light of these results. – See also OA 12040.
- (12699) *PANTALA*. International journal of odonatology, Vol. 2, No. 1 (21 May 1999). Special issue in honour of the 70th birthday of Philip S. Corbet.  
*Parr, M.J.*: Philip Steven Corbet, b. 21 May 1929 (pp. 1-4); – List of publications by Philip S. Corbet including observations on Odonata; – *Lempert, J.*: *Gynacantha corbeti* spec. nov., a new dragonfly from West Malaysia (Anisoptera: Aeschnidae) (pp. 17-21); – *Wilson, K.D.P.*: Dragonflies (Odonata) of Dinghu Shan Biosphere Reserve, Guangdong province, China (pp. 23-53); – *De Marmels, J.*: Rare Venezuelan dragonflies (Odonata) evaluated for their possible inclusion in the national Red Data Book (pp. 55-67); – *Van Damme, K. & H.J. Dumont*: A drought-resistant larva of *Pantala flavescens* (Fabricius, 1798) (Odonata: Libellulidae) in the Lençóis Maranhenses, NE-Brazil (pp. 69-76); – *Clausnitzer, V.*: Description of the final-instar larva of *Notiothemis robertsi* Fraser, 1944 (Anisoptera: Libellulidae) (pp. 77-82); – *Gorb, S.N.*: Visual cues in mate recognition in the damselfly *Ischnura elegans* Vander Linden (Zygoptera: Coenagrionidae) (pp. 83-93); – *Parr, M.J.*: The terminology of female polymorphs of *Ischnura* (Zygoptera: Coenagrionidae) (pp. 95-99); – *Paulson, D.R.*: *Ischnura perparva* McLachlan (Zygoptera: Coenagrionidae) has an andromorphic female, and another suggestion to modify the terminology of female color polymorphism in Odonata (pp. 101-103); – *Cordero Rivera, A. & J.A. Andrés Abad*: Lifetime mating success, survivorship and synchronized reproduction in the damselfly *Ischnura pumilio* (Odonata: Coenagrionidae) (pp. 105-114); – *Trueman, J.W.H.*: The enigmatic Australian endemic species *Hemiphlebia mirabilis* Selys (Zygoptera: Hemiphlebiidae): four short observations and a new record (pp. 115-121); – *Rüppell, G.*: Prey capture flight of *Calopteryx haemorrhoidalis* (Vander Linden) (Zygoptera: Calopterygidae) (pp. 123-131).
- (12700) *PEDEMONTANUM*. Mitteilungsblatt der AG Odonatenfauna Sachsen-Anhalt der Entomologen-Vereinigung Sachsen-Anhalt e.V., No. 3 (March 1999). – (c/o Dr J. Müller, Frankenfelde 3, D-39116 Magdeburg).  
*Müller, J.*: Editorial (p. 1); – *Hennig, R.*: Zur Odonatenfauna des Landeskreises Wittenberg (pp. 1-6); – *Buttstedt, L. & W. Zimmermann*: Die Vogel-Azurjungfer (*Coenagrion ornatum*) im Grenzraum von Sachsen-Anhalt und Thüringen (pp. 6-9); – *Müller, J. & R. Steglich*: Weitere Gomphiden-Nachweise in grossen mitteleuropäischen Flüssen (p. 9); – Neues von der Elbe bzw. aus dem Elbtal 1998 (p. 10); – *Literatur* (pp. 10-12); – *Tagungen* (p. 12).
- (12701) *RAMIREZ, A. & R. NOVELO-GUTIERREZ*, 1999. The neotropical dragonfly genus *Macrothemis*: new larval descriptions and an evaluation of its generic status based on larval stages (Odonata: Libellulidae). *Jl N. Am. benthol. Soc.* 18(1): 67-73. – (First Author: Inst. Ecol., Univ. Georgia, Athens, GA 30602, USA).  
The larvae of *M. aurimaculata* and *M. inequiunguis* are described and illustrated. A redescription of *M. celerno* is also provided. *M. aurimaculata* can be separated from other species in the genus because it has reduced or vestigial dorsal protuberances on abdominal segments VII-IX. *M. inequiunguis* can be differentiated by the presence of 7 setae on the labial palp, in contrast to  $\leq 6$  in other species. Both species inhabit streams in areas with slow-moving water. *M. celerno* closely resembles *M. inacuta* and *M. pseudimitans*. Some features to separate larvae of *Macrothemis* from its close relative *Brechmorhoga* are given. A key for identification of all the described larvae of *Macrothemis* is provided.
- (12702) *STOKS, R.*, 1999. The effect of lamellae autotomy and sexual size dimorphism on startle-response performance in larvae of a lested damselfly (Odonata). *J. Zool., Lond.* 247(2): 269-273. – (Dept Biol., Univ. Antwerp, Groeneborgerlaan 171, B-2020 Antwerpen).  
Swimming is the most important escape mechanism

in lestid damselflies. The subject was studied experimentally in *Lestes sponsa*. In contrast with the prediction of N. McNeil (1960, *Proc. R. Ir. Acad.* [B] 61: 115-140) that lamellae loss would not affect swimming speed, swimming performance decreased in a quadratic way with the removal of subsequent lamellae. Lamellae autotomy, therefore, will considerably reduce the probability of escape from a predator. Larger larvae swim faster than smaller ones of the same instar. This may contribute to a higher survival of larger larvae compared with smaller ones when confronted with both conspecific and heterospecific predators. Despite sexual size dimorphism, with ♀ being larger, no difference in swimming speed between the sexes was found.

- (12703) TAGUNGSBAND 18. Jahrestagung der GdO in Münster, 19.-21. März 1999. 1999. Ges. deutschsprachiger Odonatologen (GdO), Mönchengladbach. 28 pp. — (c/o Mrs U. Krüner, Gelderner Str. 39, D-41189 Mönchengladbach).

*Allgemeine Informationen* (p. 2); — *Tagungsprogramm* (pp. 3-5); — *Kurzfassung der Vorträge*: *Fronek, A.*: Die Libellenfauna der Stadt Münster: ein Vergleich zweier Zeiträume (p. 6); — *Conze K.-J.*: Arbeitskreis z. Schutz u. z. Kartierung der Libellen in Nordrhein-Westfalen, AK Libellen NRW (pp. 6-7); — *Artemeyer, C.*: Zur Entwicklungsdauer von *Gomphus vulgatissimus* in der Ems (p. 7); — *Mauersberger, R.*: Die Abgrenzung des Teilareals der Sibirischen Winterlibelle, *Sympetma paedisca* (Brauer), im Norden Deutschlands (pp. 7-8); — *Kuhn, J.*: Langzeitbeobachtungen zur Ökologie von *Lestes dryas* und *Sympetrum flaveolum* (p. 8); — *Jödicke, R.*: Rätselraten um *Sympetrum* "decoloratum": Stationen einer taxonomischen Recherche (pp. 8-9); — *Wildermuth, H.*: Die Paarung von *Somatochlora alpestris*: Spermienkonkurrenz bei Corduliiden? (p. 9); — *Martens, A.*: Fortpflanzungsverhalten von *Zygonyx torridus* (pp. 9, 11); — *Rüppell, G. & D. Hilfert-Rüppell*: Alternative Paarungstaktiken bei Prachtlibellen (p. 11); — *Benken, T.*: Anmerkungen zum Paarungssystem von *Lestes macrostigma* (p. 11); — *Lindeboom, M.*: Was Sie schon immer über Libellensex wissen wollten, aber nie zu fragen wagten (p. 12); — *Zessin, W.*: Neue Befunde zur Morphologie der ältesten Libellen (p. 12); — *Jahn, P.*: Aspekte der Ontogenese und Variation der Abdominaldornen und Kopfhöcker von Libellenlarven (p. 13); — *Buczynski, P.*: Libellen von Sandgrubengewässern im südlichen Polen (p. 13); — *Schmidt, E.*: Zur Odonatenfauna eines Ton-Flachweihers im

Westmünsterland (NSG Plümerfeld Süd bei Lüdinghausen) (p. 14); — *Suhling, F.*: Libellen-Lebensgemeinschaften südeuropäischer Reisfelder: Lebenszyklen und Einflussfaktoren (pp. 14-15); — *Häusler, M.*: Prädationseffekte der Larven von *Anax parthenope*, *Orthetrum cancellatum* und *Sympetrum fonscolombii* (p. 15); — *Burbach, K. & J. Werzinger*: Fortpflanzungserfolge "mediterraner" Arten in Bayern 1998 (p. 16); — *Knaus, P.*: Populationsbiologie von *Somatochlora alpestris* (Selys, 1840) in den Zentralalpen (Anisoptera: Corduliidae) (p. 18); — *Kurzbeiträge*: *Müller, J. & R. Steglich*: Weitere Gomphiden-Nachweise in grossen mitteleuropäischen Flüssen (pp. 18-19); — *Kurzfassung der Poster*: *Ruddek, J.*: Aktuelle Gomphidenfunde in der Weser bei Bremen (p. 21); — *Dévai, G. & M. Miskolczi*: Ein Beitrag zu den Charakterisierungsmöglichkeiten der Libellenfauna (p. 21); — *Hill, B., B. Beinlich & H. Plachter*: Der Einfluss traditioneller Hütehaltung auf die Habitatnutzung von *Lestes barbarus* (Fabricius, 1798) (Odonata, Lestidae) im Naturpark Lonjsko Polje (Kroatien) (pp. 21-22); — *Kempke, D. & K. Reinhardt*: Libellenbeobachtungen in Nordostpolen (p. 22); — *Eislöffel, F.*: Das Atlasprojekt "Die Libellen in Rheinland-Pfalz" (p. 22); — *Teilnehmerliste* (pp. 23-25).

- (12704) TERZANI, F., 1999. Odonati dell'alto Appennino Mutino-Pistoiese, Emilia-Romagna e Toscana, Italia centrosettentrionale (Odonata). *Opusc. zool. flumin.* 170: 1-7. (With Engl. s.). — (Mus. Zool. "La Specola", Univ. Firenze, Via Romana 17, I-50125 Firenze).

11 spp. are listed from 13 localities. *Chalcolestes viridis*, *Lestes dryas*, *Platycnemis pennipes*, *Pyrrhosoma nymphula*, *Coenagrion puella*, *Enallagma cyathigerum*, *Aeshna cyanea*, *Cordulegaster b. boltonii*, *Libellula quadrimaculata* and *Platetrum depressum* were collected for the first time in this geographic area.

- (12705) TERZANI, F. & S. CARFI, 1999. Ricerche odonatologiche in Toscana, Italia centrale. 6. Padule di Fucecchio (Odonata). *Opusc. zool. flumin.* 170: 9-23. (With Engl. s.). — (Second Author: Via San Martino 67, I-97019 Vittoria/RG).

27 spp. are listed from 23 localities; Fucecchio Marsh, Lower Valdarno, *Calopteryx haemorrhoidalis*, *Lestes barbarus*, *Erythromma viridulum*, *Coenagrion pulchellum mediterraneum*, *Aeshna mixta*, *Anaciaeschna isosceles*, *Libellula quadrimaculata*, *Orthetrum b. brunneum*, *O. c. coeruleus*, *Crocothemis erythraea*, *Sympetrum sanguineum* and *Trithemis annulata* were

collected for the first time in this geographic area.

- (12706) USSEGLIO-POLATERA, P., S. THOMAS, J.-N. BEISEL & J.-C. MORETEAU, 1999. Illustration de la valeur indicatrice des caractéristiques biologiques des macroinvertébrés d'une communauté benthique à différentes échelles d'observation. *Annls Limnol.* 35(1): 71-80. (With Engl. s.). — (Cent. Rech. Ecol., Univ. Metz, B.P. 4116, F-57040 Metz). Mesohabitats were sampled in spring and autumn at 12 sites on river catchments of the Haute-Meuse, Mortagne and Bruche, NE France. 5 odon. fam. are family-wise considered.
- (12707) VAN BUSKIRK, J. & S.A. McCOLLUM, 1999. Plasticity and selection explain variation in tadpole phenotype between ponds with different predator composition. *Oikos* 85: 31-39. — (First Author: Inst. Zool., Univ. Zürich, Winterthurerstr. 190, CH-8057 Zürich). Experiments demonstrate the existence of phenotypic plasticity in many organisms, and suggest that it can affect interactions among spp. But it is rarely known whether naturally occurring phenotypic variation results primarily from plasticity, as assumed by the experiments, or also from processes such as local adaptation and viability selection. The data on predator-induced plasticity in amphibians are virtually all from artificial pond or laboratory experiments, so tadpoles were sampled of *Hyla versicolor* in 2 ponds with different numbers of predators, in southern Michigan, USA. Cornfield Pond had few predators, while Tinkle's Marsh (300 m away) had many predatory insects (11.4/m<sup>2</sup>) and *Ambystoma* salamanders (1.0/m<sup>2</sup>). Tadpoles from Tinkle's Marsh had shorter and shallower bodies than those from Cornfield Pond, and relatively long, deep, and brightly coloured tails. It was then asked whether the phenotypic difference could be predicted from experimental studies of plastic responses to the presence or absence of caged *Anax* dragonflies in cattle tanks, and of selection imposed by feeding *Anax* and in predator-free ponds. Plasticity accurately predicted observed population differences in traits such as tail colour, tail depth, and body length. However, for some other traits, such as tail length and body depth, naturally occurring phenotypic variation was more likely produced by selection for divergent traits in the two ponds. Tadpoles were also collected from both ponds and subjected to free-ranging *Anax* in a short-term predation trial. Tadpoles from Tinkle's Marsh, where predators were common, survived 16% better, suggesting that naturally occurring phenotypic variation is associated with changing vulnerability to predation, as has been found for experimentally reared tadpoles. The results show how experimental studies of plasticity and selection can be combined to predict phenotypic variation in nature, and suggest that such variation can modify species interactions.
- (12708) VAN DE HEIJDEN, A., 1999. [Book review.] Odon-tabel, by W. Reinboud et al. *Amoeba, Amst.* 73(2): 78-79. (Dutch). — (Author's address not stated). A comprehensive book review of the work described in OA 12591, incl. a comparison of all 3 edns published.
- (12709) VAN DYCK, H. & E. MATTHYSEN, 1999. Habitat fragmentation and insect flight: a changing 'design' in a changing landscape? *Trends Ecol. Evol.* 14(5): 172-174. — (Dept Biol., Univ. Antwerpen, Universiteitsplein 1, B-2610 Antwerpen). With reference to the work listed in OA 10732, evolutionary implications of habitat features for flight-related morphology in some Lepidoptera are briefly compared with those in *Calopteryx maculata*.
- (12710) VAN VELZEN, J.-W., 1999. *Waarnemingen-overzicht 1998*. — [Review of the 1998 observations]. KNNV-Libellenwerkgroep Zuid-Kennemerland, Haarlem, 42 pp. (Dutch). — (Orders to: LWZK, Hobbemastraat 37, NL-2102 BJ Heemstede). This is the first annual report of the Zuid-Kennemerland Dragonfly Group of the Royal Netherlands Natural History Society (cf. OA 12685). It covers the information gathered by regular monitoring and in regional systematic surveys, and lists also all incidental records.
- (12711) VAN WIELINK, P., 1999. De Kaaistoep onder de loep. *Natura, Amst.* 96(2): 35-39. (Dutch). — (Tobias Asserlaan 126, NL-5056 VD Berkel-Enschot). General; with a record of *Erythromma viridulum* from the Kaaistoep area nr Tilburg, the Netherlands.
- (12712) W.D.A.'s AGRION. Newsletter of the Worldwide Dragonfly Association, Vol. 3, No. 2 (June 1999). — (c/o J. Silsby, 1 Haydn Ave, Purley, Surrey, CR8 4AG, UK). [Signed articles:] *Endersby, I.*: Disturbing news from "downunder" (p. 23); — *Trueman, J.*: An update on the above situation (pp. 23-24); — *Pryce, D.J.*: The 1998 Cameroon Dragonfly Project Expedition (pp. 24-25); — *Parr, M.*: Dragonfly enthusiasts in Madagascar (p. 26); — *Schneider, W.*: Soqotra, the island of

dragonflies (pp. 27-28). – Other items appear under the headings: “News from members”, “News from universities”, and “Help offered & requested”. The issue also brings “Changes to Constitution & Bylaws” of the WDA, the membership of which “is now well over the 200 mark”.

- (12713) WASSCHER, M.T., 1999. *Libellen in de Amsterdamse Waterleidingduinen: analyse van de invloed van milieuvariabelen*. – [*Dragonflies in the water supply dunes of Amsterdam: analysis of the impact of environment variables*]. Europ. Invert. Survey Nederland, Leiden & Gemeentewaterleidingen Amsterdam, Vogelenzang. 53 pp. (App. 1-4 incl.). ISBN none. (Dutch). – (Author: Minstraat 15 bis, NL-3582 CA Utrecht).

With reference to the work listed in OA 12183, TWINSPAN and CANOCO analyses are presented of abiotic and biotic environmental data, gathered at 40 sites. Based on these, the odon. assemblage is defined into 6 groups of spp., detailed data on the occurrence of all spp. are presented, and some management measures are suggested.

- (12714) WILLIGALLA, C., 1999. Die Libellen im Kreis Warendorf: eine vorläufige Zusammenstellung. *Flora Fauna Kreis Warendorf* 9: 31-41. – (Brock 45, D-48346 Ostbevern).  
Based on literature and on own research, annotations are presented on the occurrence of 45 spp. in Warendorf distr., Northrhine-Westphalia, Germany.