

ODONATOLOGICAL ABSTRACTS

1983

- (17426) JENSEN, B., 1983. *Am Waldsee*. Arena, Würzburg. 63 pp. Hardcover (17.0×24.7 cm). ISBN 3-401-04035-9.

This is a Germ. edn of the original work published (1982) under the title "Skov-søen" in Denmark. The odon. are treated on pp. 40-42. No spp. are mentioned, but some are photographically documented.

- (17427) MARGRAF, T.J. & D.W. PLITT, 1983. The aquatic macrofauna and water quality of Cottonwood Creek, Oklahoma. *Proc. Okla. Acad. Sci.* 62: 1-6. — (Authors' current addresses unknown).

In Nov. 1978, 50 macroinvertebrate taxa were collected with Ekman dredge and were mostly identified to the genus. 8 odon. taxa are listed in a tab.

- (17428) O'BRIEN, M.F., 1983. Bibliographic guide to the terrestrial arthropods of Michigan. *Great Lakes Ent.* 16(3): 87-97. — (Insect Div., Mus. Zool., Univ. Michigan, Ann Arbor, MI 48109-1079, USA).

Papers dealing with distribution, faunal extensions, and identification of Michigan terrestrial arthropods are listed by order, and cover the period of 1878 to 1982. The odon. are documented by 13 publications.

- (17429) SCHMIDT, E., 1983. Odonaten als Bioindikatoren für mitteleuropäische Feuchtgebieten. *In: J. Kloft & G.G.C. Kneitz, [Eds], Bioindikation*, pp. 10-11, Inst. Angew. Zool., Univ. Bonn, Bonn. (With Engl. title). — (Coesfelder Str. 230, D-48249 Dülmen).

A comprehensive abstract of the paper listed in *OA* 4440.

1988

- (17430) BORROR, A.C., 1988. Donald J. Borror (1909-1988). *Ohio J. Sci.* 88: 207-208. — (Author's address not stated).

Biographic sketch, by his son.

- (17431) LOPEZ, H.L., [Ed.], 1988. Bibliografía limnológica argentina, 1961-1978. *Biol. acuatica* 13: iv+130 pp. — (Inst. Limnol. "Dr R.A. Ringuelet", C.C. 712, AR-1900 La Plata).

The insect section (pp. 68-85) was contributed by Dr A. Rodrigues Capitulo (address as above). It covers the publications of A.O. Bachmann, J. Belle, L.A. Bulla, H. Gloger, D.R. Paulson and D. St. Quentin.

- (17432) SYTNIK, K.M., [Ed.], 1988. *Redkie i ischezayushchie rasteniye i zhivotnye Ukrainy*. — [Rare and vanishing plants and animals of the Ukraine]. Naukova Dumka, Kiev. 256 pp. ISBN 5-12-001143-8. (Russ.).

With reference to the 2nd edn of the USSR Red Data Book (see *OA* 5090), "Coenagrion" (= *Erythromma*) lindenii and *C. mercuriale* are listed among the spp. to be conserved in the Ukraine.

1989

- (17433) BUCK, K., 1989. Libellen in unseren Kreidegrube Saturn. *Palette A-B* 1989(3): 8. — (Author deceased 5 Feb. 2006).

An (apparently invited) article in the journal of the Almen-Breitenburg Zement- und Kalkwerke, reporting on the odon. fauna of their chalk-pit, "Saturn"; Breitenburg nr Itzehoe, Schleswig-Holstein, Germany. During systematic surveys, 8 spp. were

recorded. The populations of *Sympetrum striolatum* and *S. pedemontanum* are estimated at ca 400 and 120 individuals, respectively. The latest sighting of an adult *S. striolatum* took place on 1-XI-1989.

– For bibliographic information on 2 other papers by the same Author and related to the fauna of this locality, see *OA* 7655 and 7980.

- (17434) HARRIS, A.C., 1989. Mid-winter emergence of a *Procordulia grayi* imago (Odonata: Corduliidae). *Weta* 12(2): 49-50. – (Otago Mus., Great King Str., Dunedin, NZ).

Early in Apr. 1989, a final instar ♀ larva was dredged from the bottom of a pond in Dunedin, New Zealand, at a depth of about 1.5 m. Kept at room temperature, the adult emerged on 28 July. In nature, adult emergence of *P. grayi* normally occurs between mid-Nov. and Feb., with most individuals emerging by mid-Dec.

- (17435) MANDAL, A.K. & N.C. NANDI, 1989. Fauna of Sundarban mangrove ecosystem, West Bengal, India. *Fauna Conserv. Areas zool. Surv. India* 3: ii+116 pp., 15 pls excl. – (Zool. Surv. India, 'M'Block, New Alipore, Calcutta-700053, India). The Sundarban is considered to represent the largest single mangrove belt in the world, comprising an area of 9827 km². A checklist of 25 odon. spp. appears on p. 29.

- (17436) YOSHIDA, M., 1989. Predatory behavior of three Japanese species of Metleucauge (Araneae, Tetragnathidae). *J. Arachnol.* 17: 15-25. – (Dept Biol. & Geol., Fac. Sci. & Engin., Ritsumeikan Univ., Kyoto, 603, JA).

The attacks on Zygoptera are documented in *M. kompirensis*, 16(72.7%) attacks were successful, while in 6 cases (23.3%) spider failed to capture the damselfly. The size-pull out and the wrap-bite sequences were not used, instead the bite-pull out and the bite-wrap techniques were applied in 4 and 12 cases, respectively.

2001

- (17437) CASAS, J.J., M.O. GESSNER, P.H. LANGTON, D. CALLE, E. DESCALS & M.J. SALINAS, 2001. Diversity of patterns and processes in rivers of eastern Andalusia. *Limnetica* 25(1/2): 155-170. (With Span. s.). – (First Author; Depto Biol. Vegetal & Ecol., Univ. Almeria, ES-04120 Almeria).

The outstanding diversity of fluvial ecosystems in E Andalusia (Spain) is documented; it is mostly attributable to the high environmental heterogeneity of the region. In Spearman correlations of environmental variables and taxonomic richness, with Axis 1 and 2 documented by a canonical correspondence analysis of the environmental variables-macroinvertebrate taxa matrix, Odon. are orderwise specified.

- (17438) SCHWEIGHOFER, W., 2001. Tagfalter, Heuschrecken und Libellen im Wildnisgebiet Dürrenstein. *LIFE-Projekt Wildnisgebiet Dürrenstein, Forschungsbericht*, pp. 180-204. Abt. Naturschutz, Niederöst. Landesregierung, St. Pölten. – (Artstetten 150, A-3661 Artstetten).

8 odon. spp. are reported from the Wilderness Area of Dürrenstein, Niederösterreich, Austria.

2002

- (17439) RAAB, R., J. GEPP, H. LANG & C. LANG, 2002. Quelljungfern, Österreichs Insektenarten des Jahres 2002. *Entomologica austriaca* 6: 3-4. (With Engl. s.). – (First Author: Anton-Bruckner-Gasse 2/2, A-2232 Deutsch Wagram).

The dragonflies of the genus *Cordulegaster* were chosen as Austrian "Insects of the year 2002". The biology of *C. bidentata*, *C. boltonii* and *C. heros* is here briefly outlined. The article is directed at general readership.

- (17440) VAN BUSKIRK, J., 2002. Phenotypic lability and the evolution of predator-induced plasticity in tadpoles. *Evolution* 56(2): 361-370. – (Inst. Zool., Univ. Zürich, Winterthurerstr. 190, CH-8057 Zürich).

The rate at which behaviour and morphology of *Rana temporaria* tadpoles change when confronted with a switch in the predation environment was measured at 2 points in development. Hatching tadpoles that had been exposed during the egg stage to *Aeshna cyanea* larvae were not phenotypically different from those exposed as eggs to predation-free conditions, and both responded similarly to post-hatching predator treatments, but tadpoles switched from high-risk to predator-free treatments were slower to adjust their activity.

2003

- (17441) HODGKISON, S. & J.-M. HERO, 2003.

Seasonal, sexual and ontogenetic variations in the diet of the 'declining' frogs *Litoria nannotis*, *Litoria rheocola* and *Nyctimystes dayi*. *Wildl. Res.* 30: 345-354. — (Sch. Envir. & Appl. Sci., Griffith Univ., PMB 50 Gold Coast Mail Centre, Qld 9217, AU). Faecal analyses were used to investigate the diets of the 3 endangered frogs in Tully Gorge, N Queensland, Australia. These spp. feed indiscriminately on a range of terrestrial and aquatic invertebrates, the 2 *Litoria* spp. also on adult and larval odon. The diet of *L. nannotis* displayed a significant seasonal shift in the numeric and volumetric prey composition. Its wet-season diet contained significantly greater numbers and volume of Odon. In the same sp., ♀♀ consumed a significantly greater volume of Odon. than did juveniles.

- (17442) THEISCHINGER, G., 2003. The larva of *Choristhemis olivei* (Tillyard) (Odonata: Synthemistidae). *Lin. biol. Beitr.* 35(1): 657-660. — (NSW Dept Envir. & Climate Change, P.O. Box 29, Lidcombe, NSW 1825, AU). The supposed larva of this sp. is described and illustrated from NE Queensland and compared with other Australian Synthemistidae spp. From the possibly sympatric *C. flavoterminalata* it can be separated by its smaller size, a more prominent median lobe of the prementum, a smaller number of palpal dentations and by fan-like setal structures on the postocular lobe.

2004

- (17443) LIU, Y., X. GAO, F. YUAN, C. WANG & D. GUO, 2004. Faunal analysis and distribution of dragonflies in Beijing. *J. Beijing Normal Univ.* (Nat. Sci.) 40(3): 375-379. (Chin., with Engl. s.). — (Lab. Biodiv. & Engin., Beijing Normal Univ., Beijing-100875, China). During a 2001-2003 survey, 50 spp. were recorded from Beijing, China, of which 29 spp. (58%) are palaeartic, 10 (20%) oriental, and 11 spp. (22%) are classified as cosmopolitan. A checklist is provided.
- (17444) SCHWEIGHOFER, W., 2004. Neues von den Quelljungfern (Libellen). *Lanius-Information* 13(1/2): 13. — (Artstetten 150, A-3661 Artstetten). A note on the occurrence, distribution and habitat preference of *Cordulegaster bidentata*, *C. bolto-*

nii and *C. heros* in Austria. On the Feldbringbach stream near Gossam (southern Waldviertel) the 3 spp. co-occur.

- (17445) TENNESSEN, K.J. & T.E. VOGT, 2004. *Ophiogomphus smithi* n. sp. (Odonata: Gomphidae) from Wisconsin and Iowa. *Proc. ent. Soc. Wash.* 106(3): 540-546. — (First Author: P.O. Box 585, 125 N Oxford St., Wautoma, WI 54982, USA). The new sp. is described and illustrated from 24 ♂ and 15 ♀. Holotype ♂: USA: Wisconsin, Eau Claire co., confluence of Sth Fork Eau Claire river and Horse creek, 12-VI-1994; deposited in FSCA, Gainesville/FL). It resembles *O. aspersus* Morse; however the ♂ has shorter proximal lobes on the anterior hamules and the ♀ has occipital horns and a shorter vulvar lamina.
- (17446) ŽIVIĆ, I., Z. MARKOVIĆ & M. BRAJKOVIĆ, 2004. Impact of waste-waters from mine "Lece" on diversity of macrozoobenthos in the Gazdarska Reka river, right-hand tributary of the Jablanica Reka river. *Proc. 2nd Congr. Ecologists Macedonia*, Ohrid, pp. 247-251. — (First Author: Fac. Biol., Univ. Belgrade, Studentski trg 16, RS-11000 Beograd, Serbia). *Gomphus vulgatissimus* and *Onychogomphus forcipatus* larvae are recorded from the Gazdarska river (Serbia?). Habitat features at the sampling sites are stated.

2005

- (17447) ARECHAVALETA, M., N. ZURITA, M.C. MARRERO & J.L. MARTIN, [Eds], 2005. *Lista preliminar de especies silvestres de Cabo Verde (hongos, plantas y animales correstres)*. Consejería de Medio Ambiente y Ordenación Territorial, Gobierno de Canarias, La Laguna. 155 pp. ISBN 84-89729-25-5. (Bilingual: Span./Port.). — (Distributor: Dirección general del Medio Natural, Consejería de Medio Ambiente y Ordenación Territorial, Ctra. La Esperanza km 08, ES-2-38071 La Laguna, Santa Cruz de Tenerife, Canary Islands). 12 odon. spp. occurring in the Cape Verde archipelago are listed. The islands from where they were recorded are specified. — See also OA 17478.
- (17448) BADY, P., S. DOLÉDEC, C. FESL, S. GAYRAUD, M. BACCHI & F. SCHÖLL, 2005. Use of invertebrate traits for the biomonitoring of

European large rivers: the effects of sampling effort on genus richness and functional diversity. *Freshw. Biol.* 50: 159-173. — (First Author: UMR CNRS 5023, LEHF, Univ. Lyon, 43 Blvd du 11 novembre 1918, F-69622 Villeurbanne).

The invertebrate data were collected from the Danube, the Rhine and the Loire rivers. To describe the functional composition of assemblages, 66 categories of 14 biological traits related to body morphology, life history, dissemination potential and feeding habits were used. In a fuzzy correspondence analysis, performed on the biological traits of the genera, the majority of insects, including Trichoptera, Ephemeroptera, Plecoptera and Odon. (Calopteryx, Platycnemis), were opposed along the first axis to other insects (Coleoptera, Heteroptera), Turbellaria, Mollusca, Hirudinea and Crustacea. Gastropoda and Crustacea were further separated from other taxa along the second axis. Richness estimates were strongly dependent on sampling effort and showed much variation with season and location. In contrast, functional diversity had greater accuracy with less sampling effort and the precision of the estimates was higher than in those of richness both across sampling occasions and sampling reaches. These results are further arguments towards conducting research on the design of a biomonitoring tool based on biological traits.

- (17449) RESENDE, D.C., 2005. *Libellulidae (Anisoptera, Odonata) phylogeny and body size and thermoregulation effects on behavioral evolution*. Thesis Doctor Scientiae, Univ. Fed. Viçosa. vii+93 pp. (Port., with Engl. s.). — (Lab. Ecol. e Solos, Cién. Biol., Centro Universitário do Leste de Minas Gerais, R. Bárbara Heliodora, 725 Bom Retiro, BR-35160-215 Ipatinga, MG).

A hypothesis on the libellulid phylogeny is proposed based on morphological characters of 37 genera, mainly of Brazilian provenance. It is shown that the time spent in flight depends on body weight of a sp. and there is no relationship between hindwing anal area or abdomen surface and the time spent in flight. There was a reduction in body length during the libellulid evolution. It is hypothesized that basal spp., with large bodies and depending on solar radiation, are restricted to open habitats, whereas the occupation of shady environments caused a reduction in body length, which also affected geographical distribution and diversification rates.

- (17450) ROTACH, A., 2005. *Faunistische Aufnahmen Insel Ufnau im Auftrag des Klosters Einsiedeln*. OePlan, Rapperswil. 17 pp., 1 map excl. — (c/o OePlan, Spinnereistr. 29, CH-8640 Rapperswil). The Ufnau island is situated in the E part of the Zürich Lake, Switzerland, and has a surface of 112.645 m². It is owned by the Monastery of Einsiedeln, and belongs administratively to the municipality of Freienbach/SZ. A list is presented of 7 common odon. spp., encountered during 3 days (V, VII, IX-2005) at 3 wetland localities on the island.

- (17451) VAN DE MEUTTER, F., L. DE MEESTER & R. STOKS, 2005. Water turbidity affects predator-prey interactions in a fish-damselfly system. *Oecologia* 144: 327-336. — (First Author: Lab. Aquat. Ecol., Univ. Leuven, Ch. de Bériotstraat 32, B-3000 Leuven).

Community structure may differ dramatically between clear-water and turbid lakes. These differences have been attributed to differences in the cascading effect of fish on prey populations, owing to the reduced efficiency of fish predation in the presence of macrophytes. However, recent theoretical ideas suggest that water turbidity may shape predator-prey interactions, and it is predicted that prey will relax its antipredation behaviour in turbid water (H1). As a result, the nature of predator-prey interactions is expected to shift from both direct and indirect in clear water to dominantly direct in turbid water (H2). Here, these ideas are tested in a fish-*Ischnura elegans* predator-prey system. In a first behavioural experiment, it was looked at antipredation behaviour of larvae isolated from habitats that differ in turbidity, in the presence of fish in clear and turbid water. As predicted in H1, the larvae were more active in turbid than in clear water. In a complementary enclosure experiment, larvae were reared in a clear-water pond and a turbid pond, respectively, and the origin of the larvae (clear-water, turbid pond), fish presence (absent, present), and vegetation density (sparse, abundant) were manipulated. In both ponds, fish had a direct negative effect on survival of the larvae, which was mitigated in the presence of vegetation. In the fish treatment, the change in average body mass tended to be higher in the turbid pond than in the clear-water pond, suggesting indirect effects of fish were mitigated in the turbid pond. This was supported by a negative effect of fish on the effective growth

rate of larvae in the clear pond, but not in the turbid pond. These results are compatible with the idea that predator-prey relationships are mainly governed by direct effects in turbid water, and by direct and indirect effects in clear water.

- (17452) ŽIVIĆ, I., Z. MARKOVIĆ & J. ILIĆ, 2005. Composition, structure, and seasonal dynamics of macrozoobenthos in the Temska and Visočica rivers (Serbia). *Arch. biol. Sci.*, Belgrade 57(2): 107-118. – (First Author: Fac. Biol., Univ. Belgrade, Studentski trg 16, RS-11000 Beograd, Serbia). *Onychogomphus forcipatus* is recorded from the Temska river (Temštica).

2006

- (17453) KLAUS, D. & C. KAISER, 2006. Aktuelle Funde der Gemeinen Keiljungfer *Gomphus vulgatissimus* (L., 1758) im Södraum Leipzig. *Mitt. sächs. Ent.* 73: 19-20. – (Authors' addresses not stated). 2 *G. vulgatissimus* adults are brought on record from the vicinity of Rötha (Saxony, Germany), 5/16-V-2005.
- (17454) KOTARAC, M., M. GOVEDIČ, A. ŠALAMUN & M. PODGORELEC, 2006. *Raziskava kvalifikacijskih vrst kačjih pastirjev za potrebe izvedbe celovite presoje vplivov na okolje v okviru priprave državnih lokacijskih načrtov za III. razvojno os – potencialno Natura 2000: območje Ježevec (SI3000006)*. – [Inquiry into the qualifier dragonfly species for the requirements of a complete assessment of environmental impacts in the framework of the national planning of location schemes for the 3rd developmental axis, potentially Natura 2000: Ježevec]. CKFF, Ljubljana. 21 pp. (Prepared for Ministrstvo za okolje in prostor, Ljubljana). (Slovene) – (CKFF, Klunova 3, SI-1000 Ljubljana). The Ježevec region is located SW of Slovenj Gradec (Slovenia). The study deals with *Cordulegaster heros*; its population in ca 11 km of streams (surface 2 km²) is estimated at 5000-10000 larvae. – See also OA 16577.
- (17455) MOROZ, M.D., S. CZACHOROWSKI, K. LEWANDOWSKI & P. BUCZYŃSKI, 2006. Aquatic insects (Ephemeroptera, Plecoptera, Odonata Heteroptera, Trichoptera) of oak forest flood plain in the Prypyatskiy National Park. *Vesci nac. Akad. Nauk Belarusi* 2006(2): 111-116. (Russ., with

Engl. s.). – (Last Author: Dept Zool., UMCS, Akademicka 19, PO-20-033 Lublin).

30 odon. spp. are listed, incl. *Sympetrum depressiusculum*, which is new for the fauna of Belarus.

- (17456) ŚNIEGULA, S., 2006. Contribution to the knowledge of dragonflies (Odonata) of Borne Sulinowo (Pomeranian Lake District) with particular reference to endangered and protected species. *Wiad. ent.* 25(4): 197-212. (Pol., with Engl. s.). – (Rakowo 32, PO-78-445, Lubowo). 37 spp. are reported from 11 localities; NW Poland. 8 of these are threatened and/or protected by law in Poland and are discussed here in detail.
- (17457) VERSHININ, V.J. & N.L. IVANOVA, 2006. Peculiar features of the trophic relations of an introduced species, *Rana rudibunda* (Pallas, 1771), depending on habitat conditions. *Povolzh. ekol. Zh.* 2006(2/3): 119-128. (Russ., with Engl. s.). – (Inst. Plant & Anim. Ecol., Ural Br. Russ. Acad. Sci., 8-Marta 2002, RUS-620144 Yekaterinburg). *R. rudibunda* appeared in the late 1960s spontaneously on the eastern slope of the Middle Ural, where it settled in thermally polluted habitats. Among the items of its diet are listed adult Lestidae and unidentified odon. larvae.
- (17458) WESTERMANN, K. & F.-J. SCHIEL, 2006. Einwanderungsversuche der Schwarzen Heidebelle (*Sympetrum danae*) in die Oberrheinebene. *NatSchutz südl. Oberrhein* 4: 245-250. (With Engl. s.). – (First Author: Buchenweg 2, D-79365 Rheinhauten). During 1976-2005, 80 observations of *S. danae* were recorded for the Upper Rhine Valley (Baden Württemberg, SW Germany). In 6 cases, successful reproduction has taken place. Previously the sp. was autochthonous in the region, but presently it is represented only by immigrants from the Black Forest and (probably) from the Vosges and Jura mountains. The decline of *S. danae* is probably due to the almost complete loss of adequate habitats, caused by hydraulic engineering.
- (17459) ZUANON, J., F.A. BOCKMANN & I. SA-ZIMA, 2006. A remarkable sand-dwelling fish assemblage from central Amazonia, with comments on the evolution of psannophily in South American freshwater fishes. *Neotrop. Ichthyol.* 4(1): 107-118. (With Port. s.). – (First Author: CPBA, Caixa

Postal 478, INPA-Inst. Nac. Pesquisas da Amazônia, BR-69083-970 Manaus, Amazonas).

5 fish spp. of 4 fam. were studied in a clear-water forest streamlet in the Rio Negro drainage (Brazil). The nocturnally active *Gymnorhynchichthys rondoni* (Rampichthyidae) searches for interstitial prey with its long snout while moving along the streamlet channel. A gomphid larva (which buries deep in the sand) is reported from its gut contents. In the other 4 fish spp. no odon. prey was found.

2007

- (17460) BENTON, T. & J. DOBSON, 2007. *The dragonflies of Essex*. Essex Field Club in association with Lopinga Books. Frontispiece, xii+228 pp. Hardcover (15.3×21.5 cm). ISBN 0-905637-18-6. Price: £ 20.- net.

Although considered in the Foreword (contributed by S.J. Brooks) as a new edn of that described in OA 6577, this is actually a completely new work: updated, very much enlarged and restyled. Among the novelties is also the inclusion of col. photographs of spp. and habitats. Based on the survey conducted during 2000-2006 (26 spp. recorded), Essex harbours 23 breeding spp., including the recent colonisation by *Erythromma viridulum*. Since 1900, 6 spp. have been reported that were not re-found during the present survey. The apparent changes in flight periods of some spp. are rather suggestive. Many spring-flying spp. emerge earlier than they did 20 yr ago and some spp. continue to fly later and/or more individuals survive to a later date.

- (17461) BUCZYNSKI, P., 2007. Najazd z południa i kleska Sybiraków: jak ocieplenie klimatu zmienia naszą faunę ważek. – [Invasion from the South and defeat of the Siberians: how is climate warming changing our dragonfly fauna]. *Kraska* 15(2): 18-22. (Pol.). – (Dept Zool., UMCS, Akademicka 19, PO-20-033 Lublin).

The effects of warming up of the climate on the odon. fauna of Poland are reviewed. A few examples: in some univoltine spp. a second generation was noticed (*Coenagrion puella*, *Ischnura elegans*), while some semivoltine spp. appear to complete their development locally within a single yr (some Gomphidae, some *Leucorrhinia* spp.). Since mid 1990s, records of the migratory *Anax ephippiger* are increasing and so are those of *Aeshna affinis*. Some mediterranean *Orthetrum* and *Sympetrum*

spp. and *Crocothemis erythraea* are repeatedly recorded from northern localities, whereas the northern *Coenagrion armatum* is becoming significantly restricted to the N and E. Some hydrological effects and their impact on certain spp. are also outlined.

- (17462) CANNINGS, R.A., 2007. Recent range expansion of the praying mantis, *Mantis religiosa* Linnaeus (Mantodea: Mantidae), in British Columbia. *J. ent. Soc. Br. Columb.* 104: 73-80. – (Roy. Brit. Columbia Mus., 675 Belleville St., Victoria, BC, V8W 9W2, CA).

Includes a photograph of a green adult *M. religiosa* feeding on a female *Sympetrum obtusum* (Trail, Oasis Wetland, BC, 26-VIII-2007).

- (17463) CATLING, P.M., C.D. JONES & P. PRATT, [Eds], 2007. *Ontario, Odonata*, Vol. 7 (including observations for the year 2005). Toronto Entomologists' Assoc., Toronto. iv+226 pp. Softcover (21.1×27.2 cm). ISBN 0921631-31-6. Price: US\$ 28.- net. – (Orders to: C. Rickard, 1606 Crediton Pkwy, Mississauga, ON, L5G 3X3, CA).

Hutchinson, R. & B. Ménard: First observations on larvae of *Epiaeschna heros* (Odonata: Aeshnidae) in Quebec, Canada (pp. 1-7); – *Morgenstern, B.*: Great Lakes Odonata meeting 2005, a huge success (pp. 8-9); – *Oldham, M.J.*: *Rhionaeschna mutata* in Ontario (pp. 10-15); – *Catling, P.M., B. Kostiuk, C. Lewis & B. Bracken*: Observations on local field trips (Arnprior area), Annual meeting of the Dragonfly Society of the Americas, 2005 (pp. 16-23); – *Jones, C.D.*: Observations on "northern" field trips (upper Ottawa Valley), Annual meeting of the Dragonfly Society of the Americas, 2005 (pp. 24-27); – *Catling, P.M. & B. Kostiuk*: Post conference field trip, Annual meeting of the Dragonfly Society of the Americas, 2005 (pp. 28-32); – *Rothfels, C.*: Odonata of Halton region, Ontario (pp. 33-37); – *Anax longipes* (Aeshnidae): possibly breeding in Canada (pp. 38-41); – Dense damer swarm in Algonquin Provincial Park: observations and questions (p. 42); – Three years of Hamilton odonate count (pp. 43-48); – *Colin, D.J.*: *Gomphus ventricosus* in Ontario (p. 49); – *Catling, P.M.*: Why are dragonflies important? (pp. 49-50); – *Cook, J.*: *Williamsonia fletcheri*, new to Grenville (p. 50); – *Catling, P.M. & C.D. Jones*: Accessibility of electronic Odonata databases related to Ontario Odonata publications (p. 50); – *Catling, P.M., C.D. Jones & P. Pratt*: Introduction to the year 2005 Ontario Odonata

- summary records (pp. 51-52); – Observations of Odonata in Ontario during 2005 (pp. 53-208); – Corrections (p. 209); – Ontario Odonata projects (p. 209); – News and comments (pp. 209-210).
- (17464) DuBOIS, R.B., K.J. TENNESSEN & M.S. BERG, 2007. Efficacy of morphological characters for distinguishing nymphs of *Epitheca cynosura* and *Epitheca spinigera* (Odonata: Cordulidae) in Wisconsin. *Great Lakes Ent.* 40(3/4): 129-139. – (First Author: Dept Nat. Resour., Bureau Endangered Resour., Ecol. Inventory & Monitoring Sect., 1401 Tower Ave, Superior, WI-54880, USA). Attempts to distinguish exuviae and last instar larvae of the 2 spp. using lateral spine characters have proven to be unreliable, and recent use of setae counts on only one side of the prementum or one labial palp have led to confusion because these structures often hold unequal numbers of setae on the sides of the same specimen. Based on exuviae of 67 reared *E. cynosura* and 55 reared *E. spinigera* from lakes throughout Wisconsin, the efficacy was tested of previously used character states for distinguishing these spp. and a search was made for new characters to improve the reliability of regional keys. The most reliable diagnostic character was the combined number of setae on both sides of the prementum and on both labial palps (≤ 35 *E. cynosura*; ≥ 36 *E. spinigera*), which correctly determined 96% of the specimens. For the small percentage of specimens that lie in the region of overlap in total setae number, it was found that total exuviae length, cerci \div epiproct ratios of ♀ \div ♀ , tubercle distance \div epiproct ratios of ♂ \div ♂ , and the shape of the dorsal hook on segment 8 could be used to strengthen determinations.
- (17465) FINCKE, O.M., 2007. Consecuencias de la ecología de las larvas sobre la territorialidad y el éxito reproductor de una libélula neotropical. In: J. Leigh et al., [Eds], *Ecología y evolución en los Tropicos*, pp. 135-152, Smithsonian. Instn. – (Dept Zool., Univ. Oklahoma, Norman, OK 73019, USA). Span. edn of the work described in OA 8405.
- (17466) HAMMERLE, E., 2007. Ergänzungen zur Libellenfauna des Naturschutzgebietes Gsieg-Obere Mähder (Lustenau, Vorarlberg, Österreich). *Vorarlberg Naturschau* 20: 313-318. (With Engl. s.). – (St. Antoniusstr. 18, A-6890 Lustenau). 7 spp. are added to the list presented in the paper listed under OA 14426.
- (17467) JABŁOŃSKA-BARNA, I., 2007. Macroinvertebrate benthic communities in the macrophyte-dominated Lake Łuknajno (northeastern Poland). *Oceanol. hydrobiol. Stud.* 36 (Suppl. 4): 29-37. – (Appl. Ecol., Fac. Envir. Sci & Fisheries, Univ. Warmia & Mazury, Oczapowskiego 5, PO-10-957 Olsztyn). The lake is situated in the Great Masurian Lakes Region, and has the status of a Nature Reserve (since 1937) and that of a Biosphere Reserve (since 1977). Larval *Enallagma cyathigerum* and *Ischnura elegans* are reported in mean densities 6 ind/m².
- (17468) KALAN, G., 2007. *Podrobnejši načrt upravljanja za projektno območje Petelinjek, del območja Natura 2000 Ličenca pri Poljčanah.* (Natura 2000 v Sloveniji: upravljavski modeli in informacijski sistem). – [A more detailed management model for the area of Petelinjek, part of Natura 2000 region Ličenca pri Poljčanah. (Natura 2000 in Slovenia: management models and information system)]. Zavod za varstvo narave, Celje. 57 pp. (Slovene). – (c/o Zavod za varstvo narave, Opekarniška 2, SI-3000 Celje). Includes considerations on *Leucorrhinia pectoralis*.
- (17469) KALNINŠ, M., 2007. Brown orthetrum, *Orthetrum brunneum* (Fonscolombe, 1837) (Odonata, Libellulidae), a new dragonfly species in Latvia. *Acta biol. Univ. daugavp.* 7(2): 109-111. – (Dept Zool. & Anim. Ecol., Fac. Biol., Univ. Latvia, Kronvalda Bulv. 4, LV-1586 Riga). A teneral ♂ , Klāni Nat. Reserve, 12-VII-2005, is brought on record. The sp. has not been previously reported from Latvia. The status of the Latvian odon. fauna stands now at 58 spp.
- (17470) LAHIRI, A.R., S. SANDHU & G.K. WALIA, 2007. *Gynacantha pallampurica* sp. nov. from northern Himachal Pradesh, India (Odonata: Aeshnidae). *Rec. zool. Surv. India* 107(3): 45-49. – (First Author: C-7, Arabinda Arena, Calcutta-700118, India). Both sexes are described. Holotype ♂ : Andretta (Pallampur, Himachal Pradesh), 29-IX-2004; deposited in National Zoological Collection, ZSI, Calcutta). The new sp. is compared with *G. dravida*; the diagnostic features are stated.

- (17471) LEMELIN, R.H., 2007. Finding beauty in the dragonfly: the role of dragonflies in recreation and tourism. *J. Ecotourism* 6(2): 139-145. – (Sch. Outdoor Recreation, Parks & Tourism, Lakehead Univ., 955 Oliver Rd, Thunder Bay, ON, P7B 5E1, CA).
A research note on the discussion surrounding dragonfly-human relationships and the role of Odon. in socio-cultural norms in recreational and tourism activities.
- (17472) LOZANO, F., A. GARRE & P. PESSA-CQ, 2007. Descripción del último estadio larval de *Acanthagrion aepiolium* (Odonata: Coenagrionidae). *Revta soc. ent. argent.* 66(1/2): 1-4. (With Engl. s.). – (First Author; Inst. Limnol. “Dr R.A. Ringuélet”, C.C. 712, AR-1900 La Plata).
The final instar larva is described and illustrated based on material from Corrientes (Argentina). Its structural features are compared with those of *A. ablutum* and *A. hildegarda*.
- (17473) MÜLLER, Z., 2007. *Szitakötő-fajgyűjtések tér- és időbeli változásainak szünbiológiai elemzése*. Debreceni Egyetem, Debrecen. 128 pp. ISBN 978-963-473-027-9. (Hung., with Engl. s., but without translation of the title).
Deals with the composition, ecology, human impact etc. of/on odon. communities in the active floodplain of the Tisza, between Tiszabercel and Balsa; Hungary. This is a PhD dissertation presented at the Univ. of Debrecen and includes also Author's complete bibliography (1997-2007, 69 titles; pp. 121-128).
- (17474) STATZNER, B., N. BONADA & S. DOLÉDEC, 2007. Conservation of taxonomic and biological trait diversity of European stream macroinvertebrate communities: a case for a collective public database. *Biodiv. Conserv.* 16: 3609-3632. – (First Author: CNRS-Ecol. Hydrosyst. Fluviaux, Univ. Claude Bernard Lyon-1, F-69622 Villeurbanne Cedex).
The use of databases for the conservation of biodiversity is increasing. During the last decade, such a database has been created for European stream macroinvertebrates. Today, it includes 527 sites that are the least human-impacted representatives of many stream types across many European regions. It includes data on the abundance of 312 invertebrate genera, several environmental site characteristics, collection methods, bibliographic data sources, and 11 biological traits of the genera (e.g. size, life cycle, food and feeding habits, described in 61 categories). The database will be useful in addressing many topics that are potentially relevant to biodiversity conservation. To illustrate this potential, examples of how the data could be exploited are provided here. First, the frequency of some taxonomic and biological characteristics (e.g. richness and diversity of genera and traits) of the macroinvertebrate communities is described and it is assessed how these characteristics are related (e.g. how trait richness increases with genus richness). Second, the frequency of some characteristics of the genera and traits (e.g. occurrence frequency, abundance, dispersion index) are described and again it is assessed how these characteristics are related (e.g. how occurrence increases with abundance). Finally, it is suggested how the database could be developed into a collective, publicly accessible database that covers stream types and regions of Europe more comprehensively.
- (17475) VAN TOL, J., 2007. The Platystictidae of the Moluccas and Misool (Odonata). *Dt. ent. Z.* 54: 3-26. – (Naturalis, P.O. Box 9517, NL-2300 RA Leiden).
The Platystictidae of the Moluccas and Misool (Indonesia) are revised. All spp. are assigned to *Drepanosticta* Laidlaw. Representatives of this gen. are known from the larger islands in the region, viz. Halmahera, Bacan, Obi, Ambon, Buru, Seram, and from the Kai island group. Aru is poorly studied for odon., and no platystictids are known. 9 new spp. are described, viz. *Drepanosticta halmahera* sp. n., *D. rudicola* sp. n., *D. sembilanensis* sp. n. and *D. siu* sp. n., all from Halmahera; *D. bifida* sp. n. and *D. psygma* sp. n. from Bacan; *D. misoolensis* sp. n. from Misool; *D. amboinensis* sp. n. from Ambon and *D. obiensis* sp. n. from Obi. *D. robusta* Fraser (Kai) and *D. moluccana* Lieftinck (Buru), are re-described and illustrated. A key to all spp. is provided, as well as preliminary notes on phylogenetic relationships and biogeography. Halmahera platystictids show sister-group relationships with spp. from Bacan or, remarkably, Misool. The Moluccan *Drepanosticta* spp. are assigned to the *D. lymetta* and *D. megametta* species groups, which are also known from the Philippines and the Papuan region, and the *D. moluccana* group, presumably confined to the southern Moluccas. The role of the middle

Eocene South Carolina Arc in the distributional history of the *Drepanosticta* spp. is discussed.

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- (17476) ABBOTT, J.C., [Ed.], 2008. *Dragonflies and damselflies (Odonata) of Texas*, Vol. 3. Odon. Surv. Texas, Austin/TX. vi+315 pp. Softcover (21.5×28.0 cm). ISBN 978-0-6151-9494-3. Price: UK£ 28.- net. – (Author & Publishers: Sect. Integrative Biol., Univ. Texas, Austin, TX 78712, USA).
 [Contents]: *Rose, J.S.*: Odonata of the Lower Rio Grande Valley: 2007 summary (pp. 1-3); – *Dillon, M.*: Dragonflies and damselflies of Wright Patman Lake (p. 5); – *Gallucci, T.*: The Odonata of Kerr county and the Guadalupe river system of Texas (pp. 6-11); – The Odonata of Real county and the Frio-Nueces river system of Texas (pp. 12-19); – *Anonymous*: Statistical summary of Odonata in Texas (p. 20); – *Abbott, J.C.*: Abundance and distribution of Texas Odonata (p. 21); – *Anonymous*: Diversity of Texas Odonata by county (p. 22); – *Abbott, J.C.*: Checklist of dragonflies and damselflies of Texas (pp. 23-25); – Seasonality of Odonata in Texas (pp. 26-41); – *Anonymous*: Dragonflies and damselflies of Texas listed by county (pp. 42-75); – Distribution maps of Texas Odonata (pp. 76-299); – *Abbott, J.C.*: Collection guidelines for the Odonata Survey of Texas (p. 301); – [DSA]: The Dragonfly Society of the Americas guidelines for collecting (pp. 302-303); – *Abbott, J.C.*: Specific collecting and preservation instructions (pp. 304-305); – Guidelines for field notes and data recording (p. 306); – Odonata field guides, resources, societies and suppliers (pp. 309-310); – Glossary of terms relating to Odonata (pp. 311-312).
- (17477) AGRION, WDA. Newsletter of the Worldwide Dragonfly Association (ISSN 1476-2552), Vol. 12, No. 2 (July 2008). – (c/o L. Averill, 49 James Rd, Kidderminster, Worcester, DY10 2TH, UK).
Wilson, K.: Editorial (p. 38); – *Pritchard, G.*: Message from the President (p. 39); – *Happold, D.*: Letter to Gordon Pritchard (p. 40); – *Averill, L.*: 5th Biennial General Meeting of the Worldwide Dragonfly Association (p. 41); – *Rowe, R.*: International symposia (p. 42); – *Ferreira, S.*: Portuguese dragonflies: deserts of information (p. 43); – *Reels, G.*: *Pseudolestes mirabilis* of Hainan Island, China (pp. 44-45); – *Dow, R.*: Odonata of the “Glen Forest” at Samarakan, Bintulu Division, Sarawak, Malaysian Borneo (pp. 46-48); – *Taylor, J.*: Success at last (p. 49); *Lathrocordulia metallica* etc.); – *Theischinger, G. & S. Jacobs*: Fossicking for dragonflies and connections with an endangered species (pp. 50-51); – *Van der Weide, M.J.T. & V.J. Kalkman*: Some new records of dragonflies from Oman (pp. 52-54); – *Reimer, R.W.*: An extraordinary confluence of events in the study of UAE and Oman Odonata (p. 55); – *Wilson, K.*: A brief trip to United Arab Emirates and northern Oman (pp. 56-57); – *Dijkstra K.-D.B., J. Kipping & K. Schütte*: Cameroon reconnaissance (pp. 58-62); – *Paulson, D.*: [book review]: The metalwing damselflies of the eastern tropics, by A.G. Orr & M. Hämäläinen (p. 63).
- (17478) AISTLEITNER, E., W. BARKEMEYER, G. LEHMANN & A. MARTENS, 2008. A checklist of the Odonata of the Cape Verde Islands. *Mitt. int. ent. Ver.* 33(1/2): 45-57. – (First Author: Kopfstr. 99/B, A-6805 Feldkirch).
 To date, 14 spp. have been recorded from the archipelago. The checklist is based on previously published records, unpublished details from the historical collection of Leonardo Fea and collections made on 8 trips (1998-2007). The odon. fauna comprises spp. typical for arid conditions, being widespread in Africa and known from several other African islands. – See also OA 17447.
- (17479) ANIKIN, V.V., A.V. STREZHNEV & A.G. BOYARKIN, 2008. Bioproduktivnost' soobshchestv makrozoobentosa i bioindikaciya Surskogo vodohranilishcha. – [Biological productivity of macrozoobenthos communities and bioindication of the Surskiy Retention Basin]. *Current Probl. Geogr. Ecol.* 2(4), 15 pp. (Russ.). – (Authors' postal addresses not stated).
Platycnemis pennipes and *Coenagrion hastulatum* are recorded from the Surskiy man-made lake, S of Penza (situated N of Saratov, Russia).
- (17480) CAPELLÁN, E. & A.G. NICIEZA, 2008. Constrained plasticity in switching across life stages: pre- and post-switch predators elicit early hatching. *Evol. Ecol.* 2008: pp. DOI 10.1007/s10682-008-9289-6. – (Second Author: Inst. Catábrico Biodiv., CSIC-Univ. Oviedo-Principado de Asturias, ES-33006 Oviedo).
 Theory predicts that increased risk of mortality in an early stage should select for switching earlier, while a higher risk after the transition should select

for switching later. Here, the effects of stage-specific predation risk on the timing of hatching in *Rana temporaria* are examined. Embryos were exposed to chemical cues from either an egg predator (*Haemaphysalis sanguisuda*) or a tadpole predator (*Aeshna cyanea*). The frog embryos did not discern between pre- and post-hatching specific predators, and they hatched prematurely regardless predator type. This suggests that *R. temporaria* embryos respond to predation risk in a fixed way by hatching early.

- (17481) ČEBULAR, A., 2008. Živeti ob Dravi. Erarijski parki Mariborsko jezero, Drava in Hrastovec-Kamenščak. – [Landscape parks ‘Mariborsko jezero’, ‘Drava’ and ‘Hrastovec-Kamenščak’]. *Gea. Ljubljana* 18(11): 30-35. (Slovene). – (Author’s address not stated).
A reference is made to the Hrastovec castle, with its fishpond (actually a retention lake), Komarnik, that harbours 35 odon. sp., including the largest population of *Ephedra bimaculata* in central Europe; – NE Slovenia.
- (17482) CHAKONA, A., C. PHIRI, C.H.D. MAGADZA & L. BRENDONCK, 2008. The influence of habitat structure and flow permanence on macroinvertebrate assemblages in temporary rivers in northwestern Zimbabwe. *Hydrobiologia* 607: 199-209. – (First Author: Univ. Lake Kariba Res. Stn, P.O. Box 48, Kariba, Zimbabwe).
Temporary rivers within the Nyaodza-Gachegache subcatchment were investigated. Macroinvertebrate communities of intermittent and ephemeral rivers displayed significant differences in the number of taxa, macroinvertebrate abundance, Shannon and Simpson diversity indices and in size class structure. *Syncordulia* and *Tholymis* were abundant and restricted to the intermittent sites. Clear differences were observed also between sand, gravel, cobble and vegetation habitats. Vegetation and cobbles supported distinct communities, with some taxa restricted either to vegetation (*Pseudagrion*) or cobble habitats. *Tholymis* was a major indicator sp. of the latter. In terms of ensuring optimum diversity within the subcatchment, conservation of critical habitats (cobbles and vegetation) and maintenance of natural flows are advocated as the appropriate management measures.
- (17483) CORBET, P.S. & S.J. BROOKS, 2008. *Dragonflies*. Collins, London. Frontispiece, xviii+454

pp. [New Naturalist 106]. Hardcover (15.5×22.0 cm). ISBN 978-0-00-715168-4. Price: £ 45.- net. – (Publishers: HarperCollins, 77-85 Fulham Palace Rd, London, W6 8JB, UK).

An outstanding work on the natural history of dragonflies that inhabit Britain, organised in 10 chapters. After briefly describing dragonflies as animals and insects, chapters 3-9 explore each stage of the life history in detail, giving weight to behaviour and ecology and including suggestions for future investigations. In chapter 10 the development of odonatology in Britain is traced from 1634, including the history and status of conservation and the anticipated effects of prospective climate change. Appendices comprise a checklist of spp. occurring (recorded) in Britain, an introduction to the practice and philosophy of collecting specimens and advice for photographing dragonflies in the field, the odonatological criteria according to which a site can qualify as a Site of Special Scientific Interest (SSSI) in Britain, and maps showing the dragonfly distribution in Britain. In order to solve the persisting anomaly and confusion in Engl. literature, created by the use of the term ‘dragonfly’ for both the order as a whole and for the Anisoptera, the following Engl. terminology is suggested: Odonata = *dragonflies*, Zygoptera = *damselflies*, Anisoptera = *warriorflies*.

- (17484) CORBI, J.J., S. TRIVINHO-STRIXINO & A. DOS SANTOS, 2008. Environmental evaluation of metals in sediments and dragonflies due to sugar cane cultivation in neotropical streams. *Water Air Soil Pollut.* 195: 325-333. – (First Author: Depto Hidrobiol., Univ. Fed. São Carlos, CP 676, BR-13560-970 São Carlos, SP).
The use of fertilizers in sugar cane cultivation, containing such metals as e.g. Pb, Cr, Cd, Cu and Zn, may cause impacts on hydric resources of the adjacent areas. The bioavailability of such metals was determined in 10 neotropical streams in the state of São Paulo, Brazil. 6 of these were located in the areas with sugar cane cultivation and without riparian vegetation (classified as impacted), while 4 (reference) streams were located in forested land. The results showed high concentrations of metals in the sediments and in odon. larvae in the streams located in the impacted areas. The odon. contamination by metals presents a dangerous link for the transfer of metals to the upper trophic levels: fishes, reptiles, birds and mammals.

- (17485) **CORDOBA-AGUILAR, A.**, [Ed.], 2008. *Dragonflies and damselflies: model organisms for ecological and evolutionary research*. Oxford Univ. Press, Oxford. xii+290 pp. Hardcover (19.0×25.0 cm). ISBN 978-0-19-923069-3. Price: £ 65.- net. – (Publishers: Great Clarendon St., Oxford, OX2 6DP, UK). Documents the latest advances in odon. biology and relates these to broader ecological (pp. 5-124) and evolutionary (pp. 125-274) research. – **C o n t e n t s**: *Corbet, P.S.*: Foreword (pp. VII-VIII); – *Córdoba-Aguilar, A.*: Introduction (pp. 1-3); – *Cordero-Ribera, A. & R. Stoks*: Mark-recapture studies and demography (pp. 7-20); – *Crumrine, P.W., P.V. Switzer & P.H. Crowley*: Structure and dynamics of odonate communities: accessing habitat, responding to risk, and enabling reproduction (pp. 21-38); – *Stoks, R., F. Johansson & M. De Block*: Life-history plasticity under time stress in damselfly larvae (pp. 39-50); – *McPeck, M.A.*: Ecological factors limiting the distribution and abundance of Odonata (pp. 51-62); – *May, M.L. & J.H. Matthews*: Migration in Odonata: a case study of *Anax junius* (pp. 63-77); – *Oertli, B.*: The use of dragonflies in the assessment and monitoring of aquatic habitats (pp. 79-95); – *Samways, M.J.*: Dragonflies as focal organisms in contemporary conservation biology (pp. 97-108); – *Simaika, J.P. & M.J. Samways*: Valuing dragonflies as service providers (pp. 109-123); – *Johansson, F. & D.J. Mikolajewski*: Evolution of morphological defences (pp. 127-137); – *Tynkkynen, K., J.S. Kotiaho & E.I. Svensson*: Interspecific interactions and premating reproductive isolation (pp. 139-152); – *Koenig, W.D.*: Lifetime reproductive success and sexual selection theory (pp. 153-166); – *Anholt, B.R.*: Fitness landscapes, mortality schedules, and mating systems (pp. 167-174); – *Forbes, M.R. & T. Robb*: Testing hypotheses about parasite-mediated selection using odonate hosts (pp. 175-188); – *Córdoba-Aguilar, A. & A. Cordero-Rivera*: Cryptic female choice and sexual conflict (pp. 189-202); – *Suhonen, J., M.J. Rantala & J. Honkavaara*: Territoriality in odonates (pp. 203-217); – *Van Gossum, H., T.N. Sherratt & A. Cordero-Rivera*: The evolution of sex-limited colour polymorphism (pp. 219-229); – *Serrano-Meneses, M.A., A. Córdoba-Aguilar & T. Székely*: Sexual size dimorphism: patterns and processes (pp. 231-247); – *Marden, J.H.*: Dragonfly flight performance: a model system for biomechanics, physiological genetics, and animal competitive behaviour (pp. 249-259); – *Wootton, R.J. & D.J.S. Newman*: Evolution, diversification, and mechanics of dragonfly wings (pp. 261-274). – *Glossary* (pp. 275-285) and *Index* (pp. 287-290) conclude this excellent collection of invited papers, contributed mainly by workers whose efforts have been essential in testing and constructing new ideas in odonatological research.
- (17486) **DAGUET, C., G. FRENCH & P. TAYLOR**, [Eds], 2008. The Odonata Red Data List for Great Britain. *Species Status* 11: 1-34. Joint Nature Conservation Committee, Peterborough. ISSN 1473-0154. The collaborators were: T. Beynon, S. Cham, I. Johnson, R. Mackenzie Dodds, P. Mill, N. Moore, C. Murray, A. Parr, B. Peacock, V. Perrin, D. Smallshire, I. Smith and D. Thompson.
- (17487) **DOLNÝ, A., A. MISZTA & J.B. PARUSEL**, 2008. Dragonflies (Insecta: Odonata) of Nature Reserve "Smolník" (Szumirad. Opole Voivodeship). *Natura Silesiae superiores* 11: 75-83. (Pol., with Engl. & Germ. s's). – (First Author: Dept Biol. & Ecol., Fac. Nat. Sci., Univ. Ostrava, Chittusihio 10, CZ-71000 Ostrava). Based on the 2003 and 2005 surveys, 33 spp. are listed for the reserve in the Opole voivodeship, Poland. The list includes 3 nationally protected spp. and in the Upper Silesia rare *Aeshna juncea*, *Brachytron pratense* and *Epithea bimaculata*. *Anax parthenope* and *Aeshna isosceles* were not previously recorded from Opole.
- (17488) **ERJAVECIA**. Bulletin of the Slovenian Odonatological Society (ISSN 1408-8185), No. 23 (31 Oct. 2008). (Slovene). – (c/o M. Bedjanič, Kolodvorska 21/B, SI-2310 Slovenska Bistrica). *M. Bedjanič* deals in extenso with the newly discovered Sloveniatrum robici, reproducing also the text of its original description as published in the paper listed in *OA* 17083, and providing a concise biography and appreciation of work of Simon Robič (1824-1897), to whom the new sp. is dedicated (pp. 1-10). *D. Vinko* is reviewing odonatol. results of various youth research camps and field trips in Slovenia, viz.: Brkini (pp. 10-13), Vransko (pp. 13-15), Stari trg ob Kolpi (pp. 15-17), Budanje (pp. 18-21) and Vipavska dolina etc. (pp. 21-25); and on the Dalmatian islands of Pag (pp. 25-27) and Mljet (pp. 28-30) in Croatia. Other titles in the issue: *Salamun, A.*: New records of *Anax ephippiger* in

Slovenia (p. 31-33); – *Škrinjar, P.*: Blue dragonfly (pp. 33-36; a fairy tale); – *Bedjanič, M.*: Additions to the odonatological bibliography of Slovenia, pt 23 (pp. 36-40; Nos 685-724).

- (17489) ESENKO, I., 2008. *Zgodbe iz kanuja: čudoviti svet slovenskih voda*. – [*Observations from the canoe: the marvellous world of Slovenian waters*]. Mordrijan, Ljubljana. 216 pp. ISBN 978-961-241-239-5. (Slovene).

The odon. are dealt with on pp. 93-95. The general text on dragonflies is enhanced by 15 col. field portraits of various anisopteran spp., with taxonomic nomenclature. Localities are not stated.

- (17490) FLECK, G., M. BRENK & B. MISOF, 2008. Larval and molecular characters help to solve phylogenetic puzzles in the highly diverse dragonfly family Libellulidae (Insecta: Odonata: Anisoptera: the Tetrathemistinae are a polyphyletic group. *Organisms Diversity Evolution* 8: 1-16. – (Zool. Forschungsinst. u. Museum Alexander Koenig, Adenauerallee 160, D-53113 Bonn).

The Libellulidae systematics remains an unsolved puzzle. The classification into subfamillies relies primarily on wing venational characters, as is the case for most systematic hypotheses on dragonflies. Here it is shown that the discovery of unknown libellulid larvae can change tremendously the views on phylogenetic relationships. The larvae of *Micromacromia* and *Allorhizucha* are described and illustrated. They are briefly compared with that of *Neodythemis*. The larvae of *A. klingi* and *N. africana* are extremely similar. The larva of *M. camerunica* displays well developed dorsal hooks on abdominal segments 4-8, which distinguishes it from other closely allied genera. *Micromacromia*, *Allorhizucha* and *Neodythemis* are traditionally placed within the Tetrathemistinae, but their larvae strongly resemble those in the Libellulinae. Larval morphological studies and a molecular analysis based on mitochondrial SSU, LSU and tRNA valine imply that *Micromacromia*, *Allorhizucha* and *Neodythemis* have to be placed in the Libellulinae. Consequently, the subfamily Tetrathemistinae becomes a polyphyletic group. The analysis suggests that imaginal characters, and in particular wing venation, are much more often prone to homoplasious evolution than previously anticipated. Taxonomic or systematic works predominantly based on wing venation might be in need of substantial revision, at

least within this dragonfly family, presumably even in the whole suborder Anisoptera, based on independent character sets like larval and molecular data.

- (17491) FLECK, G., A. NEL, G. BECHLY, X. DELCLOS, E.A. JARZEMBOWSKI & R.A. CORAM, 2008. New Lower Cretaceous 'libelluloid' dragonflies (Insecta: Odonata: Cavilabiata) with notes about estimated divergence dates for this group. *Palaeodiversity* 1: 19-36. (With Germ. s.). – (Second Author: Entomologie, Mus. Natn. Hist. Nat., 45 rue Buffon, F-75005 Paris).

Several new fossil Lower Cretaceous Cavilabiata ('Libelluloidea') are studied. In the *Araripelibellulidae*, ♂ *Araripelibellula martinsnetoi* Nel & Paicheler, *Araripelibellula britannica* sp. n. from the UK and *Rencordulia sinica* gen. n., sp. n. from China are described. A further specimen of *Cretaneophya strevensi* Jarzembowski & Nel is adding new information on its wing venation. In the *Chlorogomphida*, *Mesochlorogomphus crabbi* gen. n., sp. n. from the UK and *Hispanochlorogomphus rossi* gen. n., sp. n. from Spain are also described and placed in the new family *Mesochlorogomphidae*. The estimated divergence dates for the libelluloid dragonflies based on molecular data are disputed on the basis of the fossil record. The Cavilabiata probably appeared during the Early to Middle Jurassic and greatly diversified during the Early Cretaceous.

- (17492) FLECK, G., B. ULLRICH, M. BRENK, C. WALLNISCH, M. ORLAND, S. BLEIDISSEL & B. MISOF, 2008. A phylogeny of anisopterous dragonflies (Insecta, Odonata) using mtRNA genes and mixed nucleotide/doublet models. *J. zool. Syst. evol. Res.* 46(4): 310-322. – (Last Author: Dept Ent., Zool. Forschungsmus. A. Koenig, Adenauerallee 160, D-53113 Bonn).

The application of mixed nucleotide/doublet substitution models has recently received attention in RNA-based phylogenetics. Within a Bayesian approach, it was shown that mixed models outperformed analyses relying on simple nucleotide models. Here, an mtRNA data set of dragonflies representing all major lineages of Anisoptera plus outgroups was analysed, using a mixed model in a Bayesian and parsimony (MP) approach. The analyses depict a tree in which the fam. *Lestidae* is sister group to a monophyletic clade *Epiophlebia* + Anisoptera, contradicting recent morphological and molecular work. In Bayesian analyses, a deep

split was found between Libelluloidea and a clade 'Aeshnoidea' within Anisoptera largely congruent with Tillyard's early ideas of anisopteran evolution, which had been based on evidently plesiomorphic character states. However, parsimony analysis did not support a clade 'Aeshnoidea', but instead, placed Gomphidae as sister taxon to Libelluloidea. Monophyly of Libelluloidea is only modestly supported, and many inter-family relationships within Libelluloidea do not receive substantial support in Bayesian and parsimony analyses. It was checked whether high Bayesian node support was inflated owing to either: (i) wrong secondary consensus structures; (ii) under-sampling of the MCMC process, thereby missing other local maxima; or (iii) unrealistic prior assumptions on topologies or branch lengths. It was found that different consensus structure models exert strong influence on the reconstruction, which demonstrates the importance of taxon-specific realistic secondary structure models in RNA phylogenetics.

- (17493) FLIEDNER, H. & A. MARTENS, 2008. The meaning of the scientific names of Seychelles dragonflies (Odonata). *Phelsuma* 16: 49-57. – (First Author: Louis-Seegelken-Str. 106, D-28717 Bremen).
The meaning of the taxonomic names of all Odon. spp. from the Seychelles is explained in detail. These are Latin(ized), but the basis is often ancient Greek or otherwise. In their pronunciation the Latin rules of accentuation are applicable, regardless from which language a name is actually derived. In Greek words the accentuation often differs from that to be used when they are latinized.
- (17494) GENKAI-KATO, M. & H. MIYASAKA, 2008. On the existence of three predatory stonefly species in a central Japanese stream. *Ecol. Res.* 2008, 5 pp. – DOI 10.1007/s11284-008-0540-y. – (First Author: Cent. Ecol. Res., Kyoto Univ., 2-509-3 Hirano, Otsu, Shiga, 520-2113, JA).
Includes information on density, proportional abundance and dry mass of *Epiophlebia superstes* in summer and in winter, in the Kuro-kawa mountain stream, Kiso, Nagano pref., Japan.
- (17495) GÜNTHER, A., 2008. Erste Nachweise der Feuerlibelle (*Crocothemis erythraea*) im Regierungsbezirk Chemnitz. *Mitt. Naturschutzzinst. Freiberg* 2008(4): 68-71. – (Naturschutzzinstitut Freiberg, Waisenhausstr. 10, D-09599 Freiberg).
7-8 ♂ *C. erythraea* are reported from 5 localities in the districts of Freiberg and Zwickauer Land (co. Chemnitz, E. Germany), VII/VIII-2008. These are the first county sightings of this sp.
- (17496) GUNTHER, A., 2008. Erste Nachweise der Kleinen Zanglibelle (*Onychogomphus f. forcipatus*) an der Freiburger Mulde. *Mitt. Naturschutzzinst. Freiberg* 2008(4): 72-76. – (Naturschutzzinst., Waisenhausstr. 10, D-09599 Freiberg).
On 3 & 22-VI-2008, a ♂ *O. forcipatus* was sighted at the Freiburger Mulde between Gleisberg and Rosswein, E Germany. It could not be ascertained whether or not the same individual was seen on both dates. From the Mittelgebirge of Saxony, the sp. was not recorded for at least 60 yr. The recent observations may indicate a recolonization.
- (17497) HAMASAKI, K., T. YAMANAKA, K. TANAKA, Y. NAKATANI, N. IWASAKI & D.S. SPRAGUE, 2008. Relative importance of within-habitat environment, land use and spatial autocorrelations for determining odonate assemblages in rural reservoir ponds in Japan. *Ecol. Res.* 2008, 9 pp. – DOI 10.1007/s11284-008-0531-z. – (First Author: Biodiv. Div., Natn. Inst. Agro-Envir. Sci., 3-1-3 Kannodai, Tsukuba, Ibaraki, 305-8604, JA).
To clarify the major factors affecting odon. communities in rural reservoir ponds among (1) within-habitat environments, (2) land use around ponds, and (3) spatial autocorrelation, odon. adults were surveyed during 3 sampling periods in 70 ponds in Ibaraki pref. In order to determine the impact of these 3 factors on species composition, redundancy analyses were performed, while the relative contribution of each factor was evaluated using the method of variation partitioning. Out of the 41 recorded spp., 24 were used in the analysis. The cumulative effects of the 3 factors explained ca 39% of the variation in odon. species composition; spatial autocorrelation was most important, though the within-habitat environment and land use had comparable effects. Pond area and debris that had accumulated at the bottom of the ponds were selected as the within-habitat environment, and the forests and paddy fields adjacent to the ponds were selected for land use after the procedure of forward stepwise selection. The results suggest that the recent decrease of forests around the ponds had a negative effect on the odon. assemblages.

- (17498) HASSALL, C., D.J. THOMPSON & I.F. HARVEY, 2008. The impact of climate-induced distributional changes on the validity of biological water quality metrics. *Envir. Monit. Assmt* 2008, 6 pp. – DOI 10.1007/s106661-008-0709-4. – (Sch. Biol. Sci., Univ. Liverpool, Biosci. Bldg, Crown St., Liverpool, L69 7ZB, UK).
Data are presented on the distributional changes within an order of macroinvertebrates used in biological water quality monitoring. The British Odon. have been shown to be expanding their range northwards and this could potentially affect the use of water quality metrics. The results show that the families of Odon. that are used in monitoring are shifting their ranges poleward and that species richness is increasing through time at most UK latitudes. These past distributional shifts have had negligible effects on water quality indicators. However, variation in Odon. species richness (particularly in species-poor regions) has significant effect on water quality metrics. It is concluded with a brief review of current and predicted responses of aquatic macroinvertebrates to environmental warming and maintained that caution is warranted in the use of such dynamic biological indicators.
- (17499) HOLUŠA, O. & J. VANĚK, 2008. The fauna of dragonflies (Odonata) in the Krkonoše Mts. *Opera corcontica* 45: 81-98. (Czech, with Engl. s.). – (First Author: Bruzovská 420, CZ-73801 Frýdek-Místek).
25 spp. are listed from 19 localities in the Krkonoše National Park and the adjacent territories (Czech Rep.), recorded during 1982-2004. The composition of the fauna is discussed and compared to that of the Šumava Mts.
- (17500) KADOYA, T., S.-i. SUDA, J. NISHIHIRO & I. WASHITANI, 2008. Procedure for predicting the trajectory of species recovery based on the nested species pool information: dragonflies in a wetland restoration site as a case study. *Restor. Ecol.* 16(3): 397-408. – (First Author: Dept Ecosyst. Stud., Grad. Sch. Agric. & Life Sci., Univ. Tokyo, 1-1-1 Yayoi, Bunkyo-ku, Tokyo, 113-8657, JA).
Restoration of seminatural habitats in the rural agricultural landscape has become an urgent matter in environmental conservation. Here, a procedure is proposed for predicting the trajectory of species recovery and for specifying the priority of habitat types for restoration of a rural agricultural landscape, and it is applied in a case study on the recovery of odon. spp. in the Azame restoration project that began in 2003 in N Kyushu, Japan. The nestedness of the regional distribution of dragonflies was examined using a national database on wildlife distribution and the recorded spp. are listed in order of their prevalence in the region. A census was also conducted of adults currently found at the restoration site to assess species richness. By comparing these data, spp. potentially capable of inhabiting the restoration site are identified and, based on their habitat requirements, types of habitat are suggested that should be restored preferentially.
- (17501) KOTENKO, A.G., I.G. PLUSHTCH, V.M. ERMOLENKO & I.N. PAVLUSENKO, 2008. Protected insects in Kiev. *Scient. Bull. Ushgorod Univ.* (Biol.) 24: 175-177. (Russ., with Engl. s.). – (Schmalhausen Inst. Zool., Khmelnyts'kogo 15, UKR-01601 Kiev).
A commented list of insects occurring in Kiev (Ukraine) that are included either in the Ukrainian Red Book, Berne Convention list, European Red List and/or in the IUCN list. It includes 10 odon. spp.
- (17502) KUCUK, S. & A. ALPBAZ, 2008. The impact of organic pollution on the Kirmir creek and Sakarya river in Turkey. *Water Resources* 35(5): 591-597. – (First Author: Fac. Agric., Adnan Menderes Univ., TR-09100 Aydin).
The Kirmir creek is situated in the Sakarya river basin, NW Middle Anatolian region. Turkey. The information on distribution and a graph showing seasonal occurrence of Libellulidae are presented. Lower taxa are not stated.
- (17503) KUNKA, A., G. HEBDA, D. ŁEGOWSKI & R. SWIERAD, 2008. Faunistical data on selected species of dragonflies (Insecta: Odonata) in the Opole province (Southwest Poland). *Opole scient. Soc. Nature J.* 41: 101-105. – (First Author: Fiedorfa 14/308, PO-45-273 Opole).
Records of 28 rare, endangered and protected spp.
- (17504) LENCIONI, F.A.A., 2008. Angelagrion gen. nov., with description of *A. nathaliae* sp. nov. and *A. fredericoi* sp. nov. from Brazil (Odonata: Coenagrionidae). *Zootaxa* 1968: 23-32. (With Port. s.). – (Rua Anibal 216, Jardim Coleginho, BR-12310-780

Jacarei, SP).

Angelagrion gen. n. and its 2 spp. are described, viz. *A. fredericoi* sp. n. (type sp.; holotype ♂; Brazil, Univap-Campus Urbanova, São José dos Campos, SP, 17-XI-2006) and *A. nathaliae* sp. n. (holotype ♀; Brazil, Sitio Primavera, Rio Claro, SP, 25/28-II-2006). Both holotypes are in Author's collection. The new gen. is characterized by an enormous and modified internal fold of genital ligula, abdominal segments 8-10 dark brown or black contrasting with mostly bluish abdomen, sternum of S8 in ♂ with a circular bluish-white spot, and short CuA.

- (17505) *LIBELLULA*. Zeitschrift der Gesellschaft deutschsprachiger Odonatologen, GdO (ISSN 0723-6514), Vol. 27, Nos 3/4 (20 Dec. 2008). (Mostly Germ., with Engl. titles & s's). — (c/o Mrs G. Peitzner, Hamfelderredder 7 a, D-21039 Börnsen). *Dümpelmann, C. & D. Kern*: The colonisation of the river Lahn in Hesse by *Onychogomphus f. forcipatus* (Odonata: Gomphidae) (pp. 147-161); — *Goertzen, D.*: Industrial wastelands in the Ruhr, North Rhine-Westphalia: a habitat for Odonata? (pp. 163-184); — *Bouwman, J. & R. Ketelaar*: New records of *Coenagrion armatum* in Schleswig-Holstein (Odonata: Coenagrionidae) (pp. 185-190); — *Benken, T. & R. Raab*: Odonata of the 'Seewinkel' at Lake Neusiedel, Austria: frequency, population trends, and how endangered they are (pp. 191-220); — *Hunger, H. & F.-J. Schiel*: First record of *Gomphus flavipes* on the river Rhine on the Swiss-German border (Odonata: Gomphidae) (p. 221-228); — *Kunz, B.*: The beginnings of Odonata studies in Württemberg, Germany (pp. 229-252); — *Hein, A. T. & B. Kunz*: Damselflies as predators of arachnids (Odonata: Coenagrionidae; Arachnida) (pp. 253-257); — *Holuša, O.*: Caterpillars of the European spruce budmoth *Epinotia tedella* (Lepidoptera: Tortricidae) as prey of adult *Aeshna cyanea* (Odonata: Aeshnidae) (pp. 259-262); — *Hoess, R.*: Fight at the water line: larva of *Anax imperator* attacks ovipositing female *Aeshna juncea* (Odonata: Aeshnidae) (pp. 263-266); — *Mičevski, N., B. Mičevski & M. Bedjanič*: *Aeshna cyanea* and *A. juncea*, new for the fauna of Macedonia (Odonata: Aeshnidae) (pp. 267-274); — *Dyatlova, E. S. & V. J. Kalkman*: The Odonata of southwestern Ukraine, with emphasis on the species of the EU Habitat Directive (pp. 275-290); — *Martens, A., F. Suhling & F. Weihrauch*: In memoriam Philip S. Corbet (21 May 1929-13 February 2008) (pp. 291-295).
- (17506) MISKELLY, J. & B. BRETT, 2008. The Whistler Biodiversity Project. *Boreus* 28(2): 52-54. — (Authors' postal addresses not stated). Despite its close proximity to Vancouver (B.C., Canada) and its elevation range of almost 2000 m, the fauna of Whistler is not well-documented. Trying to come to terms with its insect world is one of the goals of the project. — So far, 29 odon. spp. have been recorded in the study area. The high diversity is the result of an unusual overlap between spp. typical of southern valleys, those typical of northern and mountain habitats, and peat land specialists. This diversity is not the result of the large elevation range in the study area. Few spp. have yet been recorded in the mountains; most occur in close proximity to each other in the large wetland complexes in the valley bottom. A checklist is not provided here.
- (17507) OBUHOVICH, I. I., O. V. YANCHUREVICH, A. V. RYZHAYA & A. V. HANDOGIY, 2008. Troficheskie svyazi zelenyh lyagushek s zherstvami v usloviyah urbanizirovanogo landshafta. — [The diet of *Rana esculenta* under conditions of urbanized environment]. *Vesci belarus. dzyarzh. pedagog. Univ.* (III) 55: 42-46. (With Engl. s.). — (Last Author: Dept Zool., Belarus St. Pedagog. Univ. 'Maksima Tanki', BY-220050 Minsk). In the diet of frogs pertaining to the *Rana esculenta* complex, in the Grodno region (Belarus), insects represented 91.5% of prey items, of which 2.27% on the account of Odon. Frog diets were examined at 3 localities, of which 2 were heavily anthropogenically impacted. Odon. were represented only at the relatively unimpacted site.
- (17508) *ODONATOLOGICAL ABSTRACT SERVICE* (ISSN 1438-0269), No. 22 (July 2008). 58 pp. — (Distributor: M. Schorr, Schulstr. 7/B, D-54314 Zerf). Abstracts Nos 6842-7164 of works published in 1997-2008.
- (17509) PARR, M. J., 2008. In memory of Philip S. Corbet (1929-2008). In: P. S. Corbet & F. J. Brooks, *Dragonflies*, pp. ix-x, Collins, London. — (Little Island, Stembidge, Martock, Somerset, TA12 6BW, UK). A brief overview and appreciation of P.S.C.'s principal odonatological work, in his last, posthumously published book, described in *OA* 17483. For comprehensive biographic material, see *OA* 17173.

- (17510) PESSACQ, P., 2008. Phylogeny of neotropical Protoneuridae (Odonata: Zygoptera) and a preliminary study of their relationship with related families. *Syst. Ent.* 33: 511-528. – (CONICET, Lab. Invest. Ecol. & Sist. Animal, Univ. Nac. Patagonia San Juan Bosco, Sarmiento 849, AR-9200 Esquel, Chubut).
A cladistic analysis of neotropical Protoneuridae was performed on a data matrix of 48 morphological characters and 43 terminal taxa. Representatives of paleotropical Protoneuridae, Platycnemididae and Isostictidae were included to test their relationships with neotropical Protoneuridae. Coenagrionidae was chosen as the outgroup, but alternative analyses with Platycnemididae as the outgroup were also performed. Protoneuridae appears as a polyphyletic clade with its paleotropical component being more closely related to Platycnemididae and Isostictidae. Neotropical Protoneuridae appear as a monophyletic clade; included genera, considered monophyletic or valid monotypic taxa, are *Epipleoneura* Williamson, *Idioneura* Selys, *Junix* Rácenis, *Neoneura* Selys, *Peristicta* Hagen, *Ropaneura* Santos, and *Lamproneura* De Marmels. A key to the neotropical Protoneuridae genera is included.
- (17511) REMADEVI, O.K., A. LATHEEF, C.D. CHATTERJEE & B. RAJI, 2008. Entomofauna of mangrove ecosystem of India: an annotated checklist. *Biosystematica* 2(2): 33-80. – (First Author: Inst. Wood Sci. & Technol., WBD Div., 18th Cross, Malleshwaram, Bangalore-03, Karnataka, India).
Includes a list of 37 odon. spp. reported from various mangrove ecosystems throughout India, cross-referenced to the bibliography.
- (17512) REYNOLDS, A., R.T. GLADWIN & C. SHEPPERSON, 2008. *Dragonflies and damselflies of Hertfordshire*. Hertfordshire Nat. Hist. Soc., Welwyn Garden City. 143 pp. Softcover (17.0×24.5 cm). ISBN 978-0-9521685-6-0. Price: £ 14.- net. – (Publishers: 24 Mandeville Rise, Welwyn Garden City, Hertfordshire, AL8 7JU, UK).
The Foreword was contributed by S. Cham. The history of the odon. exploration of Hertfordshire (UK) is traced from 1835 and the 2000-2005 Atlas Project is described. Out of the 30 spp. recorded from the county, 19 spp. regularly breed. The treatment of the fauna, the information provided per sp., and the site guide and descriptions are similar to the style of other British county dragonfly works.
- (17513) ROMO-BELTRÁN, A., R. MACIAS-ORDÓNEZ & A. CORDOBA-AGUILAR, 2008. Male dimorphism, territoriality and mating success in the tropical damselfly, *Paraphlebia zoe* Selys (Odonata: Megapodagrionidae). *Evol. Ecol.* 2008: 11 pp. – DOI 10.1007/s10682-008-9265-1. – (Last Author: Depto Ecol. Evolutiva, Inst. Ecol., UNAM, Apdo Postal 70-275, Coyoacán, MX-04360 Mexico, D.F.).
The study was conducted near the town of Teocelo (Veracruz, Mexico), at an elevation of 1130 m, during the 2003 reproductive season (May-Oct.). *P. zoe* has 2 ♂ morphs: a black-winged ♂ (BW) and a hyaline-winged ♂ (HW), which is in appearance similar to ♀♀. ♂♂ of both morphs defended territories, though the BWs were more commonly found doing this. BWs were larger than HWs. Among the latter, only the larger individuals were territorial. ♂ mating success was related to territorial status (territorial ♂♂ achieved a higher mating success) but not to morph or size. The territory identity also explained mating success: some territories produced more matings than others. The BWs stored more fat reserves than the HWs. However, the HW morph showed higher relative muscle mass, which is interpreted as a flexible strategy to enable ♂♂ to defend a territory. These observations are distant to what has been found in *Mnais pruinosa*, another ♂ dimorphic zygopteran, where the advantage of the non-territorial morph relies on the longevity to compensate in mating benefits compared to the territorial morph.
- (17514) SAMWAYS, M.J., 2008. *Dragonflies and damselflies of South Africa*. Pensoft, Sofia-Moscow. 297 pp. Softcover (13.9×22.5 cm). ISBN 954-642-330-0. Price: £ 34.- net. – (Publishers: Gea Milev 13 a, BG-1111 Sofia).
A full-colour guide. After a brief introduction to odon. morphology, biology, ecology, S Afr. habitats, conservation etc., the richly illustrated book gives the descriptions of and the keys to the adults of S African fauna. For each sp., sections on distribution, flight period, habitats and behaviour are included, and the respective Dragonfly Biotic Index is stated. The Zulu appellation for dragonfly is 'jigamanzil' = water dancer.
- (17515) SATHE, T.V. & K.P. SHINDE, 2008. *Drag-*

onflies and pest management. Daya Publishing House, Delhi. vii+179 pp., 56 figs incl. Hardcover with flappers (14.5×22.0 cm). ISBN 978-81-7035-543-4. Price: UK £ 19.- net. – (Publishers: 1123/74 Deva Ram Park, Tri Nagar, Delhi-110035, India). The book has 3 chapters, titled: ‘Biodiversity of dragonflies’ (pp. 1-117), ‘Biology of dragonflies’ (pp. 118-128), and ‘Utilization in biological pest control programme’ (pp. 129-152), plus a ‘Bibliography’ (pp. 153-169) and Index. The Authors are non-odonatologists, their brief biographies and portraits appear on the flappers. While the subject of the title of the book is but briefly, incompletely and inadequately dealt with, the work presents the descriptions of 14 new spp., viz.: *Anax mahalaxmi* sp. n., *Gynacantha sathei* sp. n., *Mesogomphus indica* sp. n., *Bradynopyga satarensis* sp. n., *Indothemis indica* sp. n., *I. koyinei* [sic!] sp. n., *Onychogomphus patani* sp. n., *Pantala shalaxhi* sp. n., *P. shivajiensis* sp. n., *Potamarcha humani* sp. n., *P. koyinii* [sic!] sp. n., *Rhythemis rangini* sp. n., *Trithemis hivei* sp. n., and *T. maharashtri* sp. n. As diagnostic features are mainly used the colour and (in the odon. generally occurring individual) minor variability in venation, it can be reasonably assumed all the “new taxa” are merely synonyms of the known and common spp. The localities of holotypes and other specimens are stated, but the place of deposition of the former remains unknown. Interestingly, 6 common spp. are redescribed, viz. *Crocothemis erythraea*, *C. s. servilia*, *Neurothemis t. tullia*, *Pantala flavescens*, *Trithemis festiva* and *T. pallidinervis*, based on the “holotypes”, collected by the Authors in Maharashtra, in 2004 and 2005 (!). All descriptions are accompanied by primitive photographs, whose invariably poor reproduction makes the portrayed insects virtually unrecognizable. The very few line drawings are largely schematic. The last chapter deals with the techniques of dragonfly rearing for release in the field against insect pests, and gives some information on odon. feeding on mulberry- and rice pests and on mosquitoes, all based mainly on the literature. Also described are some field experiments on the effect of dragonflies in pest control, but the designs and the results of these are inadequately described. The “bibliography” includes many for the subject irrelevant titles, while many of the important works are missing. The book is by no means fulfilling the expectations suggested by its title, and has numerous shortcomings of scientific and technical nature, hence it will be much disappointing to the reader.

(17516) SPACCESI, F. & A. RODRIGUES CAPITULO, 2008. Benthic invertebrate assemblage in Samborombón river (Argentina, S. America), a brackish plain river. *Aquat. Ecol.* 2008, 12 pp. – DOI 10.1007/s10452-008-9212-9. – (First Author: Lab. do Bentos, Inst. Limnol., Univ. La Plata, CC 712, AR-1900 La Plata, Buenos Aires).

The spatial and temporal differences in the structure and composition of benthic invertebrate community were studied at 3 sites of the river, which is an important tributary of the Rio de La Plata Estuary, having a low slope and brackish drainage. The odon. were represented by *Oxyagrion hempeli* and *Erythrodiplax nigricans*. The former occurred at a brackish water sampling site, the latter at a freshwater headstream locality.

(17517) TRIAPITSYN, S.V., R.B. QUERINO & M.C.B. FEITOSA, 2008. A new species of *Anagrus* (Hymenoptera: Mymaridae) from Amazonas, Brazil. *Neotrop. Ent.* 37(6): 681-684. (With Port. s.). – (First Author: Ent. Res. Mus., Dept Ent., Univ. California, Riverside, CA 92521, USA).

A. (Anagrus) amazonensis sp. n., a parasite of zygoteran eggs, is described and illustrated. – (See also OA 17106).

(17518) WARE, J.L., S.Y.W. HO & K. KJER, 2008. Divergence dates of libelluloid dragonflies (Odonata: Anisoptera) estimated from rRNA using paired-site substitution models. *Mol. Phylog. Evol.* 47: 426-432. – (First Author: Dept Ent., Rutgers St. Univ., New Brunswick, NJ, USA).

Data estimates from 2 relaxed-clock analyses are presented, one in which the tree is obtained using a paired-sites model for RNA stem regions, and one in which the tree is obtained using standard unpaired-sites models for all data partitions. The differences between the results of these 2 analyses are investigated in the context of non-independent evolution at stem sites, and it is examined how interpretations of biogeographical and morphological evolution are affected by differing date estimates. Divergence times and substitution rates estimated using the paired- and (unpaired)-sites models are as follows (in Myr): Root 205.7 (249.1), Macromiidae 34.2 (28.2), Epithea-Tetragoneuria 28.5 (n.a.), Cordulia-Somatochlora 65.7 (62.3), Corduliidae 87.1 (71.6), Corduliidae-Macromiidae 134.2 (140.1), Libellulidae 87.6 (57.7), Libellulidae+Macromiidae+Corduliidae 144.0 (n.a.), and Chloropetaliidae+

Sinorogomphidae+ingroup 186.3 (192.4).

- (17519) WESTERMANN, K. & E. WESTERMANN, 2008. Ein Kleiner Blaupfeil (*Orthetrum coerulescens*) in einer Meereshöhe von 1178 m NN. *Naturschutz Oberrhein* (Beih.) 2: 39-40. – (Buch-enweg 2, D-79365 Rheinhausen).

A brief discussion on a sighting of an adult ♂ *O. coerulescens* at 1178 m a.s.l. (7-IX-2002) in Black Forest, S Germany.

- (17520) WILZAK, T. & P. ZURAWLEW, 2008. [Odonata]. *Przyroda powiatu pleszewskiego*. – [*Nature of the Pleszew district*], pp. 82-84, 2 col. pls incl., Starostwo Powiatowe, Pleszew. ISBN 978-83-924749-1-3. (Pol.).

A list of 28 spp. (and col. phot. of some of these) from Pleszew, SW Great Poland (NW Poland). Localities are stated for the rare spp. only.

- (17521) YU, X., G.-H. YANG & W.-J. BU, 2008. A study of the genus *Pyrrhosoma* from China with description of a new species (Odonata, Coenagrionidae). *Acta zootaxon. sin.* 33(2): 358-362. (Chin., with Engl. s.). – (First Author: Inst. Ent., Coll. Life Sci., Nankai Univ., Tianjin-300071, China).

The research history of *Pyrrhosoma* is reviewed, and *P. latiloba* sp. n. is described. Holotype ♂, allotype ♀: Zhongdian, Yunnan, China, 4-VIII-2005; deposited in Inst. Ent., Coll. Life Sci., Nankai Univ., Tianjin, China). The new sp. is similar to *P. tinctipenne*, the diagnostic differences are tabulated. From the 2 Europ. spp. it is distinguished by colour pattern and by the ligula shape.

- (17522) ZAMPELLA, R.A., J.F. BUNNELL, N.A. PROCOPIO & D.E. BRYSON, 2008. Macroinvertebrate assemblages in blackwater streams draining forest land and active and abandoned cranberry bogs. *Wetlands* 28(2): 390-400. – (First Author: Pinelands Commission, P.O. Box 7, New Lisbon, NJ 08064, USA).

The composition of genus-level macroinvertebrate assemblages collected from 3 habitats (muck, vegetated muck, woody debris) in 12 New Jersey Pine-land blackwater streams draining forest, abandoned cranberry bogs and active cranberry bogs is compared. Most of the odon. genera were collected from muck or vegetated muck habitats. *Ischnura* was the most frequently encountered odon. taxon and it was most closely associated with active

cranberry streams. The odon. families encountered display a range of tolerance values, which do not appear to be related to stream type.

- (17523) ZESSIN, W., 2008. Überblick über die paläozoischen Libellen (Insecta, Odonatoptera). *Virgol MittBl. ent. Ver. Mecklenburg* 11(1): 7-32. – (Lange Str. 9, D-19230 Jasnitz).

An illustrated review of Palaeozoic odon. spp. (and higher taxa), published up to early 2007, with information on their age and comments on morphology. *Oboraneura kukalovae* sp. n., gen. n. (Oboraneuridae fam. n.) from the Lower Permian (Upper Autunian) of Obora (Moravia, Czech Republic) is described. A complete bibliography is provided.

- (17524) ZHANG, B., D. REN & H. PANG, 2008. New dragonflies (Insecta: Odonata: Gomphaeschnidae) from the Yixian Formation in Inner Mongolia, China. *Progress nat. Sci.* 18: 59-64. – (First Author: Coll. Life Sci., Capital Normal Univ., Beijing-100037, China).

Sophaoeschna frigida gen. n., sp. n. and *Falsosophaoeschna generalis* gen. n., sp. n. are described and illustrated from the Upper Jurassic to Lower Cretaceous Yixian Formation in Liutiaogou village, Ningcheng co. This is the first report on Odon. from this formation in Inner Mongolia, and the second record of a fossil gomphaeschnid from China.

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- (17525) ARGIA. The news journal of the Dragonfly Society of the Americas (ISSN 1061-8503), Vol. 21, No. 1 (20 March 2009). – (c/o Dr & Mrs T.W. Donnelly, 2091 Partridge Lane, Binghamton, NY 13903, USA).

[Scientific articles:] *Chadwick, W.*: The Everglades plus (pp. 7-8; list of spp., Florida); – *Krilowicz, C.*: Congregating odes (p. 8; *Sympetrum ambiguum*); – *Fliedner, H.*: Two remarkable observations from Puerto Rico (pp. 8-9; *Crocotthemis servilia*, *Erythrodiplax umbrata*); – *Paulson, D.*: *Crocotthemis servilia* in Jamaica (p. 9); – *Daigle, J.J.*: Corkscrew *Chrysobasis soirée* (pp. 9-10); – *Hudson, J.*: Collecting adventures in central Alaska, summer 2008 (pp. 10-13; records); – *Saperstein, L.*: Odonate outreach in central Alaska, summer 2008 (pp. 13-15); – *Hill, C.*: New records of Odonata from South Carolina (pp. 15-16); – *Cannings, R.A.*: [book review] Dragonflies and damselflies of South Africa,

by M.J. Samways (pp. 16-19).

- (17526) DAPKUS, D. & V. TAMUTIS, 2009. Protected species of insects in conservation areas of central Lithuania recorded in 2007. *New rare Lithuania Insect Spec.* 20: 58-63. (With Lithuan. s.). – (First Author: Dept Zool., Vilnius Pedagog. Univ., Studentu 39, LT-08106 Vilnius).
The odon. are represented by Ophiogomphus cecilia, for which 12 localities and the respective collection dates are brought on record.
- (17527) GLIWA, B. & D. SESKAUSKAITE, 2009. Rare species of Lepidoptera and Odonata recorded from the environments of Lake Praviršulis (central Lithuania) in 2007-2008. *New rare Lithuania Insect Spec.* 20: 64-68. (With Lithuan. s.). – (First Author: Chair Baltic Linguistics, Univ. Latvia, Visvalžu 4 a, LV-1050 Riga).
Records of Ischnura pumilio, Ophiogomphus cecilia and Leucorrhinia pectoralis.
- (17528) *IDF-REPORT*. Newsletter of the International Dragonfly Fund (ISSN 1435-3393), Vol. 18 (6 Apr. 2009). – (c/o M. Schorr, Schulstr. 7/B, D-54314 Zerf).
Reinhard, K.: Aufruf zur Mitarbeit: Suche kultur-odonatologische Beiträge (pp. 1-2); – Ein Nachweis des Plattbauches von 1797: der erste Libellen-nachweis in Bayern? (pp. 3-4); – *Heidemann, H.*: Die Entdeckung von Coenagrion hylas in Österreich (pp. 5-8).
- (17529) *INTERNATIONAL JOURNAL OF ODONATOLOGY* (ISSN 1388-7890), Vol. 12, No. 1 (1 Apr. 2009).
Garrison, R.W.: A synopsis of the genus Telebasis (Odonata: Coenagrionidae) (pp. 1-121, pls 1-2 excl.; incl. new spp.: T. carvalhoi, T. corbeti, T. farcimentum, T. leptocyclus, T. levis & T. williamsoni); – *Bried, J.T.*: Location and seasonal differences in adult dragonfly size and mass in northern Mississippi, USA (Odonata: Libellulidae) (pp. 123-130); – *Damm, S. & H. Hadrys*: Trithemis morrisoni sp. nov. and T. palustris sp. nov. from the Okavango and Upper Zambezi Floodplains previously hidden under T. stictica (Odonata: Libellulidae) (pp. 131-145, pls 3-4 excl.); – *Koch, K., M. Quast & G. Sahlen*: Morphological differences in the ovary of Libellulidae (Odonata) (pp. 147-156).
- (17530) OBOLEWSKI, K., K. GLINSKA-LEW-CZUK & S. KOBUS, 2009. An attempt at evaluating the influence of water quality on the qualitative and quantitative structure of epiphytic fauna dwelling on Stratiotes aloides L., a case study on an oxbow lake of the Lyna river. *J. Elementol.* 14(1): 119-134. (With Pol. s.). – (Land Reclamation & Mngmt, Univ. Warmia & Mazury, Łódzki 2, PO-10-719 Olsztyn-Kortowo).
The odon. contribution to the average biomass of the oxbow phytophilous fauna was small; the highest in June, the lowest in May. In the samples, Ischnura, Lestes and Aeshna were identified (to the genus only). The decreasing numbers were correlated with the concentration of magnesium, and their smaller biomass was associated with the concentration of potassium ions.
- (17531) *ODONATRIX*. Bulletin of the Odonatological Section of the Polish Entomological Society (ISSN 1733-8239), Vol. 5, No. 1 (31 Jan. 2009). (Pol., with Engl. s's). – (c/o Dr P. Buczyński, Dept Zool., UMCS, Akademicka 19, PO-20-033 Lublin).
Buczyński, P., T. Karasek, E. Kowalak, J. Kowalak & T. Oder: Contribution to the knowledge of dragonflies (Odonata) of the Roztocze Upland (pp. 1-6); – *Rychla, A.*: New localities of some protected and rare dragonfly species from western Poland with remarks on the hydrological state of the habitats (pp. 7-12); – *Dolata, P.T., A. Stawicki & T. Żuk*: New records of Crocothemis erythraea in the south Wielkopolska region (SW Poland) and some remarks about its detecting and the participation of amateurs in odonatology (pp. 13-16); – *Żurawlew, P.*: Occurrence and records of breeding behaviour of Crocothemis erythraea in the Pleszew Poviát (SE Great Poland) (pp. 18-21); – *Buczyński, P.*: Polish and dedicated to Poland odonatological papers, 7: the year 2008 and the supplement for the year 2007 (pp. 22-24); – Red List of dragonflies (Odonata) of the Lublin region (E Poland), second edition: 2009 (pp. 25-29); – *Tończyk, G.*: [book review] Field guide to the larvae and exuviae of British dragonflies, vol. 1: Anisoptera, by S. Cham (pp. 30-32). – The announcement of the 6th Polish Symposium of Odonatology (Poznań, 23-25 Oct. 2009) appears on pp. 16-17.
- (17532) *PTEROBOSCA*. Newsletter of the Japanese Society for Odonatology (ISSN none), No. 14/B (15 March 2009). (Jap.). – (c/o Dr S. Eda, 3-4-25

Sawamura, Matsumoto, Nagano, 390-0877, JA). Translation of titles not available. among these are 3 articles by *K. Inoue*, viz.: his address as a newly elected President of the JSO (pp. 36-37), a report on the 18th Int. Symp. Odonatol. at Nagpur, India (pp. 40-41), and an obituary for Dr S.-M. Lee (pp. 44-47).

- (17533) *2nd SLOVENIAN ENTOMOLOGICAL SYMPOSIUM: BOOK OF ABSTRACTS*, 2009. (Edited by J. Prešeren). Slovenian Ent. Soc. & Slovenian Mus. Nat. Hist., Ljubljana. 112 pp. ISBN 978-961-90337-3-9. (Bilingual: Slovene/Engl.). – (Available from: Slovenian Mus. Nat. Hist., Prešernova 20, P.O. Box 290, SI-1001 Ljubljana). [Odonatol. titles:] *Stavenga, D.G.*: Color and vision of butterflies and other insects (pp. 8-9); – *Ambrožič, Š. & G. Urbanič*: Water insects and assessment of the organic pollution of the rivers in Slovenia (pp. 10-11); – *Bedjanič, M.*: On the exceptionality and threat status of dragonfly fauna in the area between Haloze and Pohorje, NE Slovenia (Insecta: Odonata) (pp. 12-13); – *Fišer, Ž., P. Pirh, H. Leertouwer, G. Belušič & D.G. Stavenga*: Structural coloration and visual signalling in the damselfly *Calopteryx virgo* (pp. 96-97); – *Gligorović, B., V. Pešić & A. Zeković*: A contribution to the knowledge of dragonflies (Odonata) of the river Matica (Montenegro) (pp. 98-99). (For the 1st Symposium see *OA* 16492)
- (17534) SVITRA, G. & B. GLIWA, 2009. New records of *Nehalennia speciosa* (Charpentier, 1840) (Odonata, Coenagrionidae) in Lithuania in 2006-2008. *New rare Lithuania Insect Spec.* 20: 10-13. (With Lithuan. s.). – (First Author: Lithuan. Ent. Soc., Akademijos 2, LT-08412 Vilnius). 7 populations are reported from 7 districts, and the old and new records are mapped.
- (17535) VAN TOL., J., 2009. *Phylogeny and biogeography of the Platystictidae (Odonata)*. PhD thesis, Univ. Leiden. x+294 pp. ISBN none. (With Dutch s.). – (Author: Naturalis, P.O. Box 9517, NL-2300 RA Leiden). A well-balanced work, consisting of 8 papers, 7 of which were published earlier (see *OA* 13623, 15896, 17057, 17197, 17475 and *Odonatologica* 32/2003: 39-

45; 36/2007: 171-189). The previously unpublished work, authored by *J. van Tol, B.T. Reijnen & H.A. Thomassen*, is titled “Phylogeny and biogeography of Platystictidae”, pp. 3-70. The beautifully produced book (all previously published papers are uniformly reset) is divided into 2 pts, viz.: “Phylogeny and biogeography” and “Taxonomy”. Author’s curriculum vitae (born 1951, Head of Dept Terrest. Zool., Mus. Leiden; Commissioner Int. Commission Zool. Nomencl.) and his selected odonatol. bibliography (2000-2008) are also provided. – Platystictidae are widespread in SE Asia from Sri Lanka to New Guinea and occur also in central America and in northern part of S America. The larvae of most spp. live in small streams or seepage under forest canopy. Adults are found hanging from the tips of leaves or twigs along streams. The fam. is thought to have evolved more than 100 million yr ago. So far, 213 spp. are known worldwide, of which the Author described 46 as new. The group is ideal for biogeographical studies, since most spp. have small distributional ranges. A reconstruction of the phylogeny shows that several ancient lineages occur along the margin of the Indian Plate. Although Platystictidae are not known from Africa, it is hypothesized that the fam. evolved on that continent. The ancestors of the subfams Platystictinae and Sinostictinae drifted with India to Asia between 100 and 45 Myr ago. A scenario of the historical biogeography of the Platystictinae is described in relation to the palaeogeography of SE Asia since the Eocene. The Palaemnematinae most likely dispersed from Africa to the New World via Europe and the ‘North Atlantic Land Bridge’.

- (17536) [VAN TOL, J.] WIRTZ, W., 2009. Entomoloog Jan van Tol reconstrueert verspreidingsgeschiedenis van tropische libellen. – [The entomologist Jan van Tol is reconstructing the distribution history of tropical dragonflies]. *De Volkskrant* (Kennis) 87(25774): 7, issue of 28 Feb. (Dutch). – (c/o Dr J. van Tol, Naturalis, P.O. Box 9517, NL-2300 RA Leiden). A comprehensive national daily’s interview with Dr J. van Tol on the subject of his PhD dissertation (see *OA* 17535). The PhD award took place on 26 Feb. 2009, Univ. of Leiden. A portrait is included.