ODONATOLOGICAL ABSTRACTS

1980

(8761) LEMPERT, J. & H. MILEWSKI, 1980. *Mellumbericht 1980*. 127 pp. Mellumrat, Mellum. – (First Author: Vereinstr. 41, D(W)-2000 Hamburg-36).
The 1980 observations on the odon. (19 spp.) of the Northsea island of Mellum, Germany, are dealt with on pp. 14-28. Of more than local interest are the detailed descriptions of migrations in Libellula quadrimaculata, Sympetrum danae, S. flaveolum and S. vulgatum.

1982

(8762) ANGELICI, M.C., 1982. Gli odonati del comprensorio dei Monti Lepini. *In*: Contributi alla conoscenza della fauna dei Monti Lepini e qualche proposta di intervento, pp. 306-320. Regione Lazio, 13ª Comunità Montana dei Monti Lepini, Priverno, Latina. – (Author's address unknown).
13 common spp. are listed, mostly from the Amaseno R. and the small stream of Pisciarello, Lepini Mts, Latium, Italy. The general sections on odon. biology contain several inprecise and/or erroneous statements.

(8763) LEHRER, A.Z. & F. BULIMAR, 1982. Odonatele din delta Dunarii. – Odonates de la delta du Danube. *Consfat. Ent. Rep. soc. Romania* 2: 494-506. (Romanian, with Fr.s.). – (First Author, last known address: Centrul de Cercetari Biologice, Calea-23-August 20 A, Iasi, RU).
The distribution in the Danube R. Delta, Romania, of the 40 hitherto recorded spp. is mapped.

1983

(8764) HEYNE, K.-H., 1983. Das geplante Naturschutzgebiet "Tongruben bei Binsfeld": Kurzbeschreibung, Tier- und Pflanzenwelt. *Dendrocopos* 10: 51-54. – (Salmstr. 39, D(W)-5566 Salmtal).
From clay pits nr Binsfeld, Trier district, Germany, 22 odon. spp. are listed.

1984

(8765) BRUGIÈRE, D., 1984. La cordulie arctique (Somatochlora arctica) en Lozère. *Grand Duc* 24: 35. – (39 rue Sidi-Brahim, F-03200 Vichy).
Records from Mont Lozère (Lozère, France), alt. 1380 m: 10-VII, 17-VII, 15-VIII-1983.

1985

(8766) BOLE, J., 1985. Triglavski narodni park. Živalstvo. Kačji pastirji (Odonata). *In*: I. Fabjan, [Ed.], Triglavski narodni park: vodnik, p. 94, Triglavski narodni park, Bled. (Slovene). – (Author: Inst. Biol., Slovene Acad. Sci., Novi trg 5, SLO-61000 Ljubljana, Slovenia).
This (original) Slovene edition of the work (for Engl. ed. cf. *OA* 8615) is of some interest because of a few Slovene vernacular names it contains.

(8767) HALM, H., 1985. Bachaue Schaichtal. Libellen. *Ökol. aktuell* 2: 117-125. – (Author's address not stated).
25 spp. are listed from the Schaichtal backwaters, in the districts of Tübingen and Esslingen,

Baden-Württemberg, S Germany.

1986

(8768) BRUGIÈRE, D., 1986. Observations sur les odonates du Massif central. *Revue scient. Bourbon.* 1986: 42-57. – (39 rue Sidi-Brahim, F-03200 Vichy).
A commented list of 66 spp. In the region studied, Lestes v. virens is abundant, while L. v. vestalis is reported from the Forez plain (Loire) only.

(8769) BRUGIÈRE, D., 1986. Recherches sur les odonates de l'Allier, *REvue scient. Bourbon.* 1986: 32-41. – (39 rue Sidi-Brahim, F-03200 Vichy).
A commented list of 62 spp.

1987

(8770) GARCIA CASTILLO, M.V.T., 1987. *Estudio taxonomico del suborden Zygoptera del estado de Morelos (Insecta: Odonata).* Tesis para Título de Biologo, Univ. Nac. Auton. México, México. vi+134 pp. – (c/o Dr R. Novelo, Inst. Ecol., A.C., Apartado postal 63, MX-91000 Xalapa, Ver.).
A detailed treatment of 44 zygopt. spp. known from the state of Morelos, Mexico, with locality data, descriptions, structural figs and keys.

(8771) PAROLLY, G., 1987. Zwei bemerkenswerte Libellenbeobachtungen in Niederbayern. *Mitt. zool. Ges. Braunau* 5(1/4): 13-15. (With Engl.s.). – (Author's address not stated).
Aeshna viridis is recorded from Passau, Bavaria, Germany, with detailed observations on oviposition (ca 90% on Sparganium erectum, the rest on Stratiotes, twice on Iris pseudacorus) and diurnal activities. – This is a serious and well documented paper: 1 specimen was taken and brief descriptive notes ascertain the identity of the sp.

1988

(8772) GROH, K. & H. FUCHS, 1988. Zum Vorkommen der Quellschnecke Rythinella dunkeri (Frauenfeld, 1857) in der Eifel. *Mitt. dt. malakozool. Ges.* 43: 19-27. – (First Author: Georg-Spengler-Str. 23, D(W)-6100 Darmstadt-Arheiligen).
Contains a record of Cordulegaster bidentata.

(8773) JOSEPH, A.N.T. & I. SATYARANI, 1988. On a small collection of Odonata from Andhra Pradesh, India. *Rec. zool. Surv. India* 85(3): 439-450. – (Zool. Survey India, 100 Santhoms High Rd, Madras-600028, India).
An annotated list of 21 spp., 16 of which are for the first time recorded from Andhra Pradesh.

1989

(8774) GRIMMER, F., 1989. *Fliessgewässer 2. Ordnung in Mittelfranken. Erhebungen an Fliessgewässer-Libellen in den Jahren 1987 und 1988.* 43 pp., privately circulated by the Author. – (Gräfenberger Str. 31, D(W)-8500 Nürnberg-10).
For a published paper cf. *OA* 8310, the preliminary data on the Ophiogomphus cecilia habitats in the second order streams in Franconia, Germany, are dealt with in the document listed in *OA* 8836.

(8775) GRUSCHWITZ, M., 1989. Pflege- und Entwicklungsplanung für Tongruben auf der Basis ökologischer Standortbewertungen, modellhaft dargestellt an beispielen aus der Raum Montabaur/Westerwald. *Beitr. LandPfl. Rheinland-Pfalz* 12: 185-304. – (Zinzendorfstr. 9, D(W)-5450 Neuwied-1).
The ecology and aquatic community succession in clay pits are analysed on the basis of 4 localities in Rhineland-Palatinate, FRG. A chapter (pp. 210-217) is devoted to the odon. (22 spp.), with detailed circumstantial evidence on their local occurrence and habitat preferences.

1990

(8776) BURMEISTER, E.-G., 1990. Makroinvertebraten der Isar und ihrer Nebengewässer in und südlich von München. *Lauterbornia* 4: 7-23. (With Engl.s.). – (Zool. Staatssammlung, Münchhausenstr. 21, D(W)-8000 München-60).
During 1982-1985, 31 odon. spp. were recorded from the Isar R. system (section Wolfratshausen-Schäftlarn) and from the Munich area. The exact locality data are stated, and the local occurrence of some spp. is discussed. The role of

the Isar R. valley in the northward expansion of some spp. is emphasized.

(8777) FREY, D., & E. JANSEN, 1990. Das Bühler Tal bei Tübingen, Odonata-Libellen. *Ökologie aktuell* 3: 231. – (Author's addresses not stated).
A checklist of 8 spp. (Büller Valley nr Tübingen, Germany), with a brief comment on the occurrence of Cordulegaster bidentata.

(8778) HABLE, H., 1990. Ungarn-Reise der Zoologischen Gesellschaft Braunau zum Kiskunsági Nationalpark bei Kecskemét. *Mitt. zool. Ges. Braunau* 5(9/12): 201-215. – (Kleinriederstr. 3, A-4910 Ried i.I.).
Contains a list of 12 odon. spp. Of some local interest is the record of Aeshna grandis (1 ♀, Kelemen-szék, 6-VI-1990).

(8779) KÖNIG, A., K. ZINTZ & H. RAHMANN, 1990. Untersuchungen zur Libellenfauna einiger oberschwäbischer Kiesgruben unterschiedlicher Sukzession. *In*: K. Zintz, [Ed.], Ökologie und Management kleinerer Stehgewässer [Ökologie & Naturschutz, Vol. 3], pp. 465-473, Margraf, Weikersheim. ISBN 3-8236-1187-6. – (Inst. Zool., Univ. Hohenheim, Grabenstr. 30, D(W) -7000 Stuttgart-70).
The paper is largely based on the M.Sc. work of A. König, as listed in *OA* 7905.

(8780) PRITYKINA, L.N., 1990. Strekozy i stratigrafiya mela. – Dragonflies and the Cretaceous stratigraphy. *In*: V.A. Krassilov, [Ed.], Kontinental'nyy mel SSSR – Continental Cretaceous of the USSR, pp. 30-37, 217 (Engl. title), 219 (Russ. abstract), Inst. Biol. & Pedol., Far Eastern Branch USSR Acad. Sci., Vladivostok. (Russ., with Engl. title). – The complete book (224 pp., 6 pls excl.) available from the SIO, Bilthoven, at Hfl. 65,- net). – (Inst. Paleontol., Acad. Sci., Profsoyuznaya 123, RUS-117868 Moscow).
A comparison is given of the Jurassic and Cretaceous odon. assemblages, and it is shown that an essential change in the composition has taken place at the Cretacean-Palaeogene border.

(8781) ROCHE, B., 1990. Inventaire des odonates de la Corse. *Bull. Soc. Sci. hist. & nat. Corse* 55(658): 51-76. – (Author's address not stated).
A commented catalogue and distribution atlas of the 42 spp. known from the island of Corsica (= Corse), France.

(8782) SAINI, R.S. & Y.P. SINGH, 1990. Compararive anatomy of the thorax of larval Odonata. Prothorax. *Rec. zool. Surv. India* 86(1): 145-154. – (Coll. of Sci., Rewa, Madhya Pradesh, India).
Copera marginipes (Platycnemididae), Ceriagrion coromandelianum, Pseudagrion decorum, Ischnura aurora (= "delicata"), I. senegalensis (all Coenagrionidae) and Libellago lineata (Chlorocyphidae) are described. Variation among these in sclerite extension and in sculci demarcation is discussed.

(8783) TÓTH, S., 1990. A Külsö-tó szitakötö (Odonata) faunája. – Die Libellenfauna des Tihanyer Külsö-tó (Insecta: Odonata). *Folia Mis. hist.-nat. bakonyiensis* 9: 17-28. (Hung., with Engl. & Germ.s's). – (Rákóczi tér 1, HU-8420 Zirc).
A checklist of 40 spp. and a detailed analysis of the odon. fauna of the swampy Külsö-tó Lake, Tihany Peninsula, Platten Lake Highlands, Hungary, are given.

(8784) TÓTH, S., 1990. Új és ritka fajok a Bakonyi szitakötö faunájában (Insecta: Odonata). – New and rare species in the dragonfly fauna of Bakony Mountains (Insecta: Odonata). *Folia Mus. hist.-nat. bakonyiensis* 9: 29-34. (Hung., with Engl. & Germ. s's). – (Rákóczi tér 1, HU-8420 Zirc).
Aeshna grandis, Hemianax ephippiger and Onychogompus forcipatus are recorded from the Bakony Mts, Hungary, bringing the status of the regional fauna to 56 spp. – Cf. *OA* 5526, 6088.

(8785) UNRUH, M., 1990. Die Mollusken-, Libellen- und Säugetierfauna des NSG "Nordfeld Jaucha" – erste Ergebnisse einer qualitativen und quantitativen Bestandsaufnahme. *NatSchutz-Arb. Halle Magdeburg* 27(2): 17-32. – (Mus. Schloss Moritzburg, Schlossstr. 6, D(O)-4900 Zeitz).
Includes an annotated list of 18 odon. spp. from a nature reserve nr Zeitz, E. Germany, with field

notes on Anax parthenope, and data on sex ratio and weight of some spp.

1991

(8786) *AESCHNA*. Published by the Tombo Kenkyukai [= Dragonfly Research Group], Osaka, No. 25 (Dec. 15, 1991). (Jap., some papers with Engl. titles & s's). – (c/o A. Muraki, 476-2-4-1312, Kano, Higashi-Osaka, 578, JA).
Matsuki, K. & J.C. Lien: On a collection of the aeshnid dragonflies of Taiwan (pp. 2-18). – The issue also contains 8 minor scientific notes, in Japanese.

(8787) BREUER, M., G. RITZAU, J. RUDDEK & W. VOGT, 1991. Die Libellenfauna des Landes Bremen (Insecta: Odonata). *Abh. naturw. Ver. Bremen* 41(3): 479-542. (With Engl.s.). – (First Author: Lehrgeb. Zool.-Ent., FB Biol., Univ. Hannover, Herrenhäuser Str. 2, D(W)-3000 Hannover-21).
During 1980-1990, 40 spp. were reported from Bremen, 34 of which are assumed indigenous. Gomphus pulchellus and Sympetrum pedemontanum established themselves in the region only in the 1980s. The ecological and biogeographic composition of the fauna is analysed, and the regional distribution of all spp. is mapped.

(8788) CASTELLA, E., M. RICHARDOT-COULET, C. ROUX & P. RICHOUX, 1991. Aquatic macroinvertebrate assemblages of two contrasting floodplains: the Rhône and Ain rivers, France. *Regulated Rivers Res. & Manag.* 6: 289-300. – (Ecol. Eaux Douces, Univ. Lyon-I, F-69622 Villeurbanne-Cedex).
The relationship between floodplain aquatic macroinvertebrates and sector-scale parameters, such as geomorphology and history of regulation, is examined. The assemblages of 6 groups, incl. the odon., were considered. The results stress the influence of these parameters on the floodplain communities and, conversely, the relevance of macroinvertebrate assemblages for the assessment, at the landscape scale, of aquatic systems within the floodplains.

(8789) COUILLOUD, R., 1991. *Insectes, araignées & acariens: correspondances entre les dénominations scientifiques et anglo-saxonnes. – Insects, spiders, mites & ticks: equivalences between scientific and common English names.* xvi + 682 pp., CIRAD [no publisher & place]. – ISBN 2-87614-058-6. (French).
As far as the odon. are concerned (pp. 6-12), this is a completely incomprehensible work. It lists 87 ad hoc Engl. "vernacular" names, mostly for European and for some N American families and spp. (2 Hawaiian spp. are also included). For 5 spp. the Canadian name is stated. The European names are not those standardised by the British Dragonfly Society, and printed on the cover of each issue of the *J. Br. Dragonfly Soc.* Likewise, the official list of N American vernacular names is not considered (cf. *OA* 4334), nor any of the American books, using "vernacular" names at least since 1969.

(8790) DORNBUSCH, G., 1991. Wirbellose Tiere. *In*: L. Reichhoff, Das Biosphärenreservat Mittlere Elbe: Steckby-Lödderitzer Forst und Dessau-Wörlitzer Kulturlandschaft. *NatSchutz Sachsen-Anhalt* 28(1/2): 55-61. – (Author's address not stated).
25 odon. spp. are known from the "Mittlere Elbe" Nature Reserve, 16 of which are here listed; Sachsen-Anhalt, E Germany.

(8791) JANEVA, I.J., 1991. Hidrobiologichno s'soyanie na reka Ogosta prez razlichni periodi. – Saprobiological state of the river Ogosta in various periods of study, *Hidrobiologiya, Sofia* 36: 32-48. (Bulg., with Russ. & Engl.s's). – (Inst. Zool., Bulg. Acad. Sci., Blvd Ruski 1, BG-1000 Sofia).
5 odon. spp. are listed from various localities on the Ogosta R., Bulgaria.

(8792) KAUSHIK, S., S. SHARMA, M.N. SAXENA & D.N. SAKSENA, 1991. Habitat ecology of zygopteran (Odonata) nymphs in certain water bodies of Madhya Pradesh. *J. Bombay nat. Hist. Soc.* 88(3): 400-405. – (First Author: Sch. Stud. Zool., Jiwaji Univ., Vidya Vihar, Gwalior-474011, India).
Deals with 16 spp. For other details cf. *OA* 8339.

(8793) MACHADO, A.B.M., H.G. MESQUITA & P.A.R. MACHADO, 1991. Contribução au conhecimento dos odonatos da Estação Ecológica de Maracá-Roraima. *Acta amazon.* 21: 159-173.

(With Engl.s.). – (First Author: Depto Zool., Inst. Cien. Biol., Univ. Fed. Minas Gerais, C.P. 2486, BR-31270 Belo Horzonte, M.G.).
An account is given of the odon. fauna of the Maracá Ecol. Stn, Roraima. Out of the 61 recorded spp., 8 are new for Brazil, and 3 appear still undescribed (Epipleoneura, Leptobasis, Lestes) and will be named and described elsewhere. The resemblance between the fauna of Maracá and that of Venezuela is emphasized.

(8794) MALMQVIST, B., S. RUNDLE, C. BRÖNMARK & A. ERLANDSSON, 1991. Invertebrate colonization of a new, man-made stream in southern Sweden. *Freshw. Biol.* 26: 307-324. – (Dept Anim. Ecol., Univ. Umeå, S-90187 Umeå).
The invertebrate colonization of Flugströmmen, between the Tuesjön and Mjöldrängen lakes, Blekinge prov., was monitored during 18 months, and the community structure was compared with that at 10 natural reference sites nearby. The number of colonizing spp. increased rapidly during the first 3 months. Simuliid spp. were the first, followed by Ephem. and Plecopt., whereas Coleopt., Odon. (9 spp. listed) and Trich. were on average slower to colonize. After a year, the community structure closely resembled that in lake-outlet streams in the area. The possible role of competitive and predatory processes in determining the succession patterns are discussed.

(8795) MESQUITA, H.G. & B.C. MATTEO, 1991. Contribuição ao conhecimento dos Odonata da Ilha de Fernando de Noronha, Pernambuco, Brasil. *Iheringia* (Zool.) 71: 157-160. (With Engl.s.). – (Inst. Nac. Pesquisas da Amazônia, C.P. 478, BR-69011 Manaus, Amazonas).
Ischnura capreola, Erythemis vesiculosa, Miathyria marcella and Pantala flavescens are recorded, and the tentative way in which they colonized the island is discussed.

(8796) PECILE, I., 1991. La fauna odonatologica di alcuni ambienti umidi delle Alpi e Prealpi friulane (Italia nord-orientale). *Gortania* 12: 305-312. (With Engl.s.). – (Mus. Friulano Stor. Nat., Via Grazzano 1, I-33100 Udine).
Commented records of 11 spp., from 5 localities. Coenagrion hastulatum is new to the fauna of Friuli, NE Italy.

(8797) RUSEV, B.K., I.J. JANEVA & M.I. NIKOLOVA, 1991. Hidrobiologichno s'stoyanie na porechneto na reka Lom. – Hydrobiological state of the river valley of the river Lom. *Hidrobiologiya, Sofia* 36: 13-31. (Bulg., with Russ. & Engl.s's). – (Inst. Zool., Bulg. Acad. Sci., Blvd Ruski 1, BG-1000 Sofia).
5 odon. spp. are listed from the Lom R. and some of its tributaries, Bulgaria.

(8798) WATSON, J.A.L. & A.F. O'FARRELL, 1991. Odonata (dragonflies and damselflies). *In*: The insects of Australia, 2nd ed., Vol. 1, pp. 294-310, col. pl. 1 excl., Melbourne Univ. Press, ISBN 0-522-84454-5. – (First Author: Div. Ent., C.S.I.R.O., P.O. Box 1700, Canberra, ACT 2601, AU).
A completely revised work as listed in *OA* 1684.

(8799) ZHOU, W.-b. & [not transliterated joint author], 1991. [Odonata from Ningxia and Shanxi]. *J. Ningxia agric. Coll.* 12(4): 88-90. (Chin.). – (Dept Ent., Zheijang Mus. Nat. Hist., Gu-shan, Hang Zhou-310012, P.R. China).
Annotated list of 33 spp.

1992

(8800) *ABSTRACTS OF PAPERS [READ AT] THE FOURTH SOUTH ASIAN SYMPOSIUM OF ODONATOLOGY*, Chaudhary Mahadev Prasad College, Allahabad, (U.P.), 10-12 Oct. 1992. ii + 26 pp. SIO Regional Office for South Asia, Jodhpur. Edited by Dr V.K. Srivastava (Editor: Dept Zool., CMP Coll., Univ. Allahabad, 318 Alopi Bagh, Allahabad-211006, India).
Haldar, D.P.: Some aspects of protozoan parasites in odonates of India (p. 1); – *Tembhare, D.B.*: Structure and function of the neuroendocrine system in Anisoptera (p. 2); – *Srivastava, J.P. & N. Agrawal*: Prevalence and abundance of odonates in Kanpur, India (pp. 3-4); – *Sandhu, R., G. Walia & S. Gulati*: Chromosomal studies of three abundantly occurring damselflies from Himachal Pradesh (India) (p. 4); – *Rose, S. & M. Thomas*: Feeding behaviour of Anax guttatus (Burmeister) (Anisoptera: Odonata) (p. 5); – *Biswas, V., A. Begum, M.A. Bishar & B.R. Biswas*: Some co-existing drag-

onfly larvae of Ramna Lake, Dhaka, Bangla Desh (Odonata: Anisoptera) (p. 5); – *Krishnan, B. & M. Thomas*: Feeding efficiency of Bradinopyga geminata (Rambur) in relation to size and density of prey (Anisoptera: Odonata) (p. 6); – *Biswas, V., A. Begum, M.A. Bishar & S.A. Begum*: Emergence pattern of some dragonfly nymphs under the laboratory condition (Odonata: Anisoptera) (p. 6); – *Thomas, M., M. Daniel & M. Gladstone*: Morphological studies on the branchial chamber and tracheal gill lamellae of Ictinogomphus rapax (Rambur) and Anax guttatus (Burmeister) (Anisoptera: Odonata) (p. 7); – *Sandhu, R. & I. Malhotra*: Karyological studies of four aeschnid dragonflies from states of J[ammu] & K[ashmir] & H[imachal] P[radesh] (India) (p. 7); – *Thomas, M., M. Daniel & M. Gladstone*: Spatial distribution and food preference of two species of dragonfly naiads (Anisoptera: Odonata) (p. 8); – *Sandhu, R. & G. Walia*: Karyological studies of four species of damselflies (Odonata: Zygoptera) (p. 8); – *Chowdhury, S.H. & M.D. Jashim Uddin*: Morphometric studies on the larvae of Acisoma p. panorpoides (Rambur) (p. 9); – *Chowdhury, S.H. & N. Karim*: Observations on the reproductive behaviour of Copera annulata (Selys) (p. 9); – *Roy, S.P., V. Kumar & A. Kumar*: Functional analysis of odonate larval population of a fish pond (p. 10); – *Kumar, A. & S.P. Roy*: On some aspects of physiology of odonate larvae of a fish pond ecosystem (p. 11); – *Andrew, R.J.*: Structure of the post ovarian genital complex and phenomena of sperm removal and deposition in Ischnura aurora (Brauer) (Zygoptera: Coenagrionidae) (p. 12); – *Malhotra, I., R. Sandhu & S.S. Dhillon*: Twenty dragonfly karyotypes from North-West India, with a preliminary report on C & G banding of four species (Anisoptera: Libellulidae) (p. 13); – *Andrew, J.R. & D.B. Tembhare*: Development of the secondary copulatory apparatus in the dragonfly Tramea virginia (Rambur) (Anisoptera: Libellulidae) (p. 14); – *Suri Babu, B., B.K. Srivastava, A. Dubey & V.K. Srivastava*: Experimental evidence on the role of odonate larvae in biological control of mosquitoes (p. 15); – *Srivastava, V.K. & B. Suri Babu*: The biology and morphology of two anisopteran larvae, Ictinogomphus angulosus Selys and Trithemis pallidinervis Kirby, from Sagar Lake, M.P. (p. 16); – *Chowdhury, S.H. & M. Mohiuddin*: Dragonfly phenology – a mechniams for optimal habitat utilisation (p. 17); – *Ebenezer, V. & A. Mohan Daniel*: Studies on the gut-armature of dragonfly naiads of three different families (Anisoptera: Odonata) (p. 17); – *Srivastava, B.K., B. Suri Babu & V.K. Srivastava*: Description of the larva of Ischnura aurora aurora (Brauer) (Zygoptera: Coenagrionidae) from Sagar (M.P.) (p. 18); – *B. Suri Babu, K.P. Singh & V.K. Srivastava*: Identification of final instar larva of Enallagma parvum Selys (Zygoptera: Coenagriidae) (p. 18); – *Srivastava, B.K., B. Suri Babu, V.K. Srivastava & P.P. Singh*: Ethobiology of Pseudagrion decorum (Rambur) (Zygoptera, Pseudagriinae) – reproduction (p. 19); – *Tyagi, B.K.*: Prospective role of biological agents in controlling vector mosquitoes transmitting human infections (p. 20); – *Mittal, O.P.*: Genetic assessment of Odonata (p. 21); – *Mittal, O.P. & V. Gandhi*: Chromosome studies in two species of damselflies (Odonata: Zygoptera) (p. 22); – *Gunasekran, C., B.S. Emerald, A.M. Daniel & M. Gladstone*: Comparative studies on the female external genitalia of two species of dragonflies, Anax guttatus Burmeister (Aeschnidae) and Bradinopyga geminata (Rambur) (Libellulidae) (p. 23); – *Natarajan, A.V., G. Sundara Rajulu & N. Cowri*: Role of wing pads in respiration in a dragonfly Anax immaculifrons (p. 24); – *Srivastava, V.K.*: Functional morphology of the ovipositor of the damselfly Ceriagrion coromandelianum (Fabr.) (p. 25).

(8801) ADAMOVIĆ, Ž., Lj. ANDJUS & A. MLADENOVIĆ, 1992. Cordulegaster heros Theischinger, 1979 in Serbia and Macedonia (Odonata: Cordulegastridae). *Opusc. zool. flumin.* 101: 1--11. – (First Author: Inst. Med. Res., P.O. Box 721, YU-11001 Beograd, Serbia; – Second Author: Nat. Hist. Mus., Njegoševa 51, P.O. Box 401, YU-11001 Beograd, Serbia).

The records from 15 localities in Serbia (11) and Macedonia (4) are mapped and discussed, and the habitats are briefly described (alt. 380--1700 m). Morphometric data are summarized for 38 adult specimens (28 ♂, 10 ♀), and some field notes on the oviposition behaviour are stated. – The sp. is now evidenced from Austria, Slovenia, Croatia, Serbia, Macedonia, Roma-

nia, Bulgaria and Greece.

(8802) AFONSO, O., 1992. Biological quality of Ave river water (Portugal) based on the study of the benthic macroinvertebrate communities. *Publiçoes Inst. Zool. "Dr. Augusto Nobre"* 229: 1-12, 1 fol. tab. excl. – (Inst. Zool. "Dr. Augusto Nobre", Fac. Cien., Univ. Porto, PT-4000 Porto).
Quantitative data are stated genus-wise on the occurrence of 5 genera, at 7 sampling points.

(8803) AFONSO, O., 1992. Contribuição para o conhecimento dos macroinvertebrados do rio Vizela (sistema hidrico do Ave). *Publiçoes Inst. Zool. "Dr. Augusto Nobre"* 228: 1-10. (With Engl.s.). – (Inst. Zool. "Dr. Augusto Nobre", Fac. Cien., Univ. Porto, PT-4000 Porto).
Quantitative data are stated for "Agrion" and "Aeschna" from 2 sampling points at the Vizela R., N Portugal. – As it goes from some other publications of this Author, Calopteryx is to be understood under her "Agrion".

(8804) AMBRUS, A., K. BÁNKUTI & T. KOVÁCS, 1992. *A Kisalföld és a Nyugat-magyarországi peremvidék Odonata faunája.* – The Odonata fauna of Kisalföld and the West-Hungarian marginal zone. 82 pp. M.O.B.K., Kophaza. – ISBN 963-7207-066. (Almost bilingual: Hung./ Engl.). – Available, at Hfl. 25,- net, from the SIO Central Office, Bilthoven, Holland).
The odon. fauna (56 spp.) of the Hungarian NW frontier districts, along the borders with Austria, Slovenia, and (partly) Croatia is dealt with in considerable detail. The main objectives were to provide an adequate survey of this little explored area, to identify the habitats of threatened and rare spp. and to point out the sites relevant for conservation. A detailed catalogue is given of all 33419 records, the distribution and relative abundance are mapped for each sp., and the local status of each sp. is briefly outlined. The complete bibliography is appended and all the local literature data are evaluated and analysed. Some 13 localities, rivers, or areas are considered of particular conservation interest, incl. the Rába and the Kerka rivers, the backwaters of the Mura R. at Murarátka, etc.

(8805) ANDREW, R.J., & D.B. TEMBHARE, 1992. Surface ultrastructure of the egg chorion in the dragonfly, Ictinogomphus rapax (Rambur) (Odonata: Gomphidae). *Int.J.Insect Morphol. Embryol.* 21(4): 347-350. – (Dept Zool., Nagpur Univ., Nagpur Univ. Campus, Nagpur-440010, India).
SEM examination of the egg chorion in I. rapax shows hexagonal reticulation throughout the surface. The anterior pole of the egg bears a small rounded micropylar stalk with a group of 6 orifices arranged radially around a central boss, while the posterior pole consists of a sessile, truncated cone formed of 50-60 long, coiled filaments. The functional, taxonomic, and phylogenetic significance of various microstructures of the eggshell are discussed.

(8806) *ARGIA.* The news journal of the Dragonfly Society of America, Vol. 4, No. 3 (Oct. 15, 1992). – (c/o Dr T. Donnelly, 2091 Partridge Lane, Binghamton, NY 13903, USA).
Daigle, J.: Los caballeros y los caballitos. II (pp. 1-4; Engl.); – *Donnelly, N.*: The old folks visit Mexico: another perspective (pp. 4-6); – Innocents in the North woods: a Somatochlora adventure (pp. 6-7); – *Krotzer, S.*: Odonate hunting in the heart of Dixie (pp. 7-8); – *Dunkle, S.W.*: Macrothemis tessellata (Burm.), a new dragonfly for the U.S. (p. 8); – *Paulson, D.R.*: Noteworthy northwestern Odonata records for 1992 (pp. 8-9); – *Soltesz, K.*: An invasion of Tramea calverti on the northeast coast (pp. 9-10); – *Daigle, J.J.*: Florida records for 1992 (p. 10); – *Orr, R.*: Endangered Odonata of the northeastern United States and the DSA (pp. 10-11); – *Glotzhober, R.*: Is entomological collecting over regulated? (pp. 11-13); – Update on the Ohio dragonfly survey (p. 13); – [*Blanchard, S.*]: Archilestes grandis in New York (p. 14); – Another record of Enallagma basidens from New York (p. 14); – [*Orr, R.*]: Argia nahuana from Oregon (p. 14); – *Michalski, J.*: Interesting places [Missouri, Kentucky] (pp. 14-15); – *Soltesz, K.*: The use of compressed air squirt guns in collecting odonates (pp. 15-16); – *Michalski, J.*: You can photocopy dragonflies (p. 16); – *Valley, S.*: The Dragonfly Society of America's Fourth Annual Collectors' Meeting, Bend, Oregon, July 16-19, 1993 (pp. 16-18); – *Michalski, J.*: Trinidad collector's update (p. 18). – 2 commercial and

1 editorial notice conclude the issue.

(8807) ASAHINA, S., 1992. Records of some Pekingese dragonflies taken by three members participated in the 19th International Entomology Congress [sic!]. I & II. *Gekkan-Mushi* 260: 26-27, 261: 12-16. (Jap., with Engl.s.). – (Takadanobaba 4-4-24, Shinjuku-ku, Tokyo, 169, JA).
Commented list of 15 spp., taken in the Xiangshan Park area, Peking (=Beijing), China, 1/2-VII-1992.

(8808) BAKER, R.L., M.R.L. FORBES & H.C. PROCTOR, 1992. Sexual differences in development and behaviour of larval Ischnura verticalis (Odonata: Coenagrionidae). *Can. J. Zool.* 70(6): 1161-1165. (With Fr.s.). – (Dept Zool., Erindale Coll., Univ. Toronto, Mississauga, Ont., L5L 1C6, CA).
The emergence period of I. verticalis from a pond in southern Ontario lasted at least 97 days; the sex ratio of emerging larvae was not significantly different from 1:1. A 17-month study on larvae from the same pond indicated that the life cycle was univoltine and that male larvae tended to develop faster than female larvae. Analysis of instar distributions of larvae collected from a series of ponds also indicated that males were in more advanced instars than females. In the laboratory, male larvae in the final instar developed faster than female larvae in the final instar but male and female larvae in the penultimate instar developed at approximately the same rate. Male larvae in the antepenultimate instar consistently spent more time moving and crawled farther than female larvae in the antepenultimate instar. Sexual differences in larval development and behaviour could help explain sexual differences in instar distributions and altered sex ratios at emergence.

(8809) BEUTLER, H., 1992. Rote Liste Libellen (Odonata). *In*: Gefährdete Tiere im Land Brandenburg: Rote Liste, pp. 223-225, 251-252 [references], Ministerium f. Umwelt Brandenburg, Potsdam, ISBN 3-98031-22-0-8. – (Available from: Unze-Verlagsgesellschaft, Wollestr. 43, D(O)-1590 Potsdam).
There are no essential changes in the status of the fauna, compared with the Red List listed in *OA* 3261.

(8810) BEUTLER, H. & D. BEUTLER, 1992. Das Naturschutzgebiet "Lieberoser Heide" auf dem Truppenübungsplatz Lieberose. *NatSchutz Landschaftspfl. Brandenburg* 1(1): 15-19. – (Naturschutzstation Beeskow, Landesumweltamt Brandenburg, Bahrensdorfer Str. 31, D(O)-1230 Beeskow).
Contains a brief chapter on the odon. of this nature reserve, Brandenburg, Germany, but no spp. list. Reference is made to large local populations of Nehalennia speciosa, Onychogomphus forcipatus and Epitheca bimaculata.

(8811) BOSSELMANN, J., 1992. Libellen Odonata. *Jber. Pflanzen Tiere RheinlandPfalz* 1991: 130--135; Nachtrag: 142-143. – (Lerchenweg 3, D(W)-5440 Mayen).
Annotated list of 29 spp.

(8812) BRAUCKMANN, C. & B. BRAUCKMANN, 1992. Zur stratigraphischen Datierung der ältesten Fluginsekten (Pterygota; Namurium, Ober--Karbon). *Dortmund. Beitr. Landesk.* (Naturw.) 26: 59-68. (With Engl.s.). – (Fuhlrott-Mus., Auer Schulstr. 20, D(W)-5600 Wuppertal-1).
Includes figs and detailed considerations on the age of the meganisopterans Eugeropteron lunatum Riek and Geropteron arcuatum Riek (Eugeropteridae). These are the most "primitive" odon. spp. so far known, and their Lower Namurian age is considered likely. – For the original description and other information cf. *OA* 4786.

(8813) BROCKHAUS, T., 1992. Fliesswasserlibellenarten im Regierungsbezirk Chemnitz. *In*: T. Brockhaus & G. Mackenthun, [Eds], Ökologische Beurteilung von Fliessgewässern im Regierungsbezirk Chemnitz, pp. 70-76, 4 col. fold. maps excl., Staatl. Umweltfachamt, Chemnitz. – (Author: Staatl. Umweltfachamt, Stephanplatz 3, Postfach 1028, D(O)-9010 Chemnitz).
A thorough presentation of the occurrence, habitat ecology and status of Calopteryx virgo, C. splendens, Platycnemis pennipes and Pyrrhosoma nymphula in the district of Chemnitz, E Germany. – Cf. also *OA* 8395.

(8814) BROCKHAUS, T. & A. GÜNTHER, 1992. Der biologische Zustand von Fliessgewässern im Regierungsbezirk Chemnitz anhand des Vorkommens ausgewählter Leitarten. *In*: T. Brock-

haus & G. Mackenthun, [Eds], Ökologische Beurteilung von Fliessgewässern im Regierungsbezirk Chemnitz, pp. 77-89, 1 col. fold. map excl., Staatl. Umweltfachamt, Chemnitz. – (Second Author: Naturk. Mus. Freiberg, Waisenhausstr. 10, D(O)-9200 Freiberg).
Calopteryx splendens, C. virgo and Cordulegaster boltonii are among the 11 aquatic animal spp. considered in the assessment of the "biological status" of the streams in the district of Chemnitz, E. Germany.

(8815) BROOKS, S.J. & S.J. RICHARDS, 1992. A new species of Oreagrion (Odonata: Coenagrionidae): montane damselflies from New Guinea. *Tijdschr. Ent.* 135(2): 141-144. – (First Author: Dept Ent., BMNH, Cromwell Rd, London, SW7 5BD, UK).
O. pectingi sp.n. (holotype ♂, allotype ♀: Papua New Guinea, Chimbu prov., Mt Wilhelm, nr waterfall entering W end Lake Piunde, alt. 3600 m, 6-VIII-1990; several paratypes: Star Mts, S slopes of Mt Capella, alt. 3000-3200 m, 16/19--XI-1991; all deposited in BMNH) is described and illustrated, and the position of Oreagrion within the Ischnurinae is briefly discussed.

(1816) BUCHWALD, R., 1992. Libellen (Odonata) in Wiesengräben Südwestdeutschlands. *Naturschutzforum* 5/6: 219-240. – (Lehrstuhl Geobot., Inst. Biol. II, Univ. Freiburg, Schänzlestr. 1, D(W)-7800 Freiburg).
The ecology and habitat selection of the odon. in the grassland ditches in SW Germany (27 spp.) are analysed.

(8817) *BULLETIN OF AMERICAN ODONATOLOGY.* Journal of the Dragonfly Society of America, Vol. 1, Nos 2 (June 1992) and 3 (Oct. 1992). Edited by & available from Dr T.W. Donnelly (2091 Partridge Lane, Binghamton, NY 13906, USA); – For the 1992 subscription cf. *OA* 8396.
(No. 2): *Dunkle, S.W.*: Distribution of dragonflies and damselflies (Odonata) in Florida (pp. 29-50; cf. *OA* 8543). – (No. 3): *May, M.L.*: Morphological and ecological differences among species of Ladona (Anisoptera: Libellulidae) (pp. 51-56); – *Córdoba Aguilar, A.*: Comportamiento reproductivo y policromatismo en Ischnura denticollis Burmeister (Zygoptera: Coenagrionidae) (pp. 57-64).

(8818) CHOVANEC, A., 1992. The influence of tadpole swimming behaviour on predation by dragonfly nymphs. *Amphibia-Reptilia* 13: 341-349. – (Fed. Environ. Agency, Spittelauer Lände 5, A-1090 Wien).
Interspecific differences in the anuran tadpole swimming behaviour that could influence the vulnerability and prey selection by larval Aeshna cyanea are analysed. Laboratory experiments indicate that Bufo bufo tadpoles are almost continuously in motion, which makes them easy prey for dragonflies. Hyla arborea tadpoles are likewise very active and slow swimmers, but they show effective predator avoidance strategies (different habitat preferences, high evasiveness). The predation risk of Rana dalmatina larvae is low, since these are largely motionless and benthic, when moving, they do so at high speed. Bombina bombina is intermediate in swimming activity, velocity and vulnerability.

(8819) *CONTACTBLAD NEDERLANDSE LIBELLENONDERZOEKERS* – [Newsletter of the Netherlands Dragonfly Workers], No. 21 (Oct., 1992). (Dutch) – (c/o M.T. Wasscher, Minstraat 15 bis, NL-3582 CA Utrecht).
The report on the odonatol. trip to Zuid Limburg (*R. Ketelaar*, pp. 2-3) is followed by 3 exhaustive book reviews (*M. Wasscher, R. Ketelaar*, pp. 4-7). The anonymous list of the 1992 noteworthy records was prepared by *M. Wasscher* (pp. 11-12). Brief technical notes on phenology of Pyr rhosoma nymphula (p. 13), the occurrence of Sympetrum flaveolum in the Netherlands (pp. 13-17) and on Erythromma viridulum (pp. 17-19) were contributed by resp. *R. Jödicke* (in Engl.), *M. Wasscher* and *W. Reinboud & T. de Groot*. Technical instructions and brief descriptions concerning various forthcoming projects are authored by resp. *M. Wasscher* (pp. 8--11) and *M. Klasberg & A. Stroo* (p. 20; cf. also *OA* 8752).

(8820) CRAWFORD, C.G., D.J. WANGSNESS & J.D. MARTIN, 1992. Recovery of benthic-invertebrate communities in the White River near Indianapolis, Indiana, USA, following implementation of advanced treatment of municipal

wastewater. *Arch. Hydrobiol.* 126(1): 67-84. – (First Author: US Geol. Surv., 5957 Lakeside Blvd, Indianapolis, IN 46278, USA).
Argia sedula and Hetaerina americana are the only odon. spp. listed.

(8821) DAVID, S., 1992. Vysledky inventarizačniho vyzkumu vážek (Insecta: Odonata). – Ergebnisse der Inventarisationserforschung der Libellenfauna (Insecta: Odonata). *Prehl. odbor. Vysl. XV. vychodoslov. Tabora Ochrancov Prir., Moldova-nad-Bodvou*, pp. 111-124. (Slovak, with Germ.s.). – (Tekovské Muz., P.O. Box 69, CZ-93469 Levice, Slovakia).
17 spp. are listed from various habitats in the S. Huta-Štos-Medzev-Jasov area, Erzgebirge, Slovakia. The composition of the fauna is briefly discussed.

(8822) DIEHL, S., 1992. Fish predation and benthic community structure: the role of omnivory and habitat complexity. *Ecology* 73(5): 1646-1661. – (Dept Anim. Ecol., Univ. Umeå, S-901 87 Umeå).
In a man-made lake nr Lund, Sweden, the impact of the omnivorous predator, perch (Perca fluviatilis), and of habitat structural complexity on the structure of a freshwater littoral macroinvertebrate community was experimentally evaluated. The paper contains only a very brief general reference to the odon.

(8823) DONATH, H., 1992. Die Libellen der nordwestlichen Niederlausitz. (Schluss). *Biol. Stud., Luckau* 21: 35-52. – (Hauptstr. 21, D(O)-7960 Luckau).
This is the final paper in the series as listed in *OA* 6121, 6478, 6971, 8336, 8356. It contains the local Red List, and deals with the regional status and habitat distribution of the spp. A comprehensive bibliography is appended.

(8824) DUMONT, H.J., 1992 [reprint]. *Libellen in de omgeving van Denderleeuw.* – [*Dragonflies of the Denderleeuw area*]. Studie J. Kets-prijs, Zoo, Antwerpen. ii+167 pp., 37 pls (some col.) excl. (Flanders). – (Inst. Anim. Ecol., Univ. Gent, Ledeganckstraat 35, B-9000 Gent).
This is a limited reprint edition of the original 1959 work, submitted for the J. Kets-Award of the Zool. Gardens of Antwerp. The monograph has a considerable historical and biographical value as the first major odonatological work of one of the great odonatologists (who commenced publishing in the local magazine, *Natuur Echo*, in 1957). The wealth of accurate field observations on behaviour, population biology, etc. is astonishing for the time when these disciplines were still little developed and most of the published information largely anecdotal. The nicely produced book (xerox) certainly represents one of the most noteworthy titles in Belgian odonatol. literature.

(8825) DUMONT, H.J., A. Yu. HARITONOV & S.N. BORISOV, 1992. Larval morphology and range of three West Asiatic species of Onychogomphus Selys, 1854 (Insecta: Odonata). *Hydrobiologia* 245: 169-177. – (First Author: Inst. Anim. Ecol., Univ. Gent, Ledeganckstraat 35, B-9000 Gent).
The previously unknown larvae of O. assimilis (Schneider) and O. lefebvrei (Ramb.) are described, and that of O. flexuosus (Schneider) is redescribed, all on material from SW Turkmenistan and Tajikistan. Their distributions extend from the E Mediterranean to central W Asia and are mapped. A differential diagnosis and key for identification of the larvae of the 4 central Asiatic members of the genus are also provided. This includes the nominate form O. forcipatus, since the larva of the local ssp. albotibialis Schmidt still remains unknown.

(8826) FAASSE, M.A., 1992. Iets over de fauna van de Linge. – [A note on the fauna of the Linge R.]. *Natura, Utrecht* 89(5): 107-108. (Dutch). – (Schorerstraat 14, NL-4341 GN Arnemuiden).
Calopteryx splendens is recorded from the Linge, nr Gorkum, the Netherlands; 19-VII-1990, 10-VII-1991.

(8827) FILSNER, F.H., 1992. Die Libelle braucht mehr als einen Teich. *Grundschulmagazin* 7(11): 15-16. – (Feulersdorf 24, D(W)-8601 Wonsees).
Detailed teaching instructions on the subject "dragonfly", for the tachers of the 3rd primary school grade. – Cf. also *OA* 6903.

(8828) FISCHER, R. & H. KOMNICK, 1992. Peroxisomal acyl-CoA oxidase and chain-shortening of dietary fatty acids in the midgut of dragonfly larvae, Aeshna cyanea. *Insect Biochem. molec. Biol.* 22(8): 793-801. – (Second Author: Inst. Cell Biol., Univ. Bonn, Ulrich-Haberland-Str. 61a, D(W)-5300 Bonn-1).
Activity of peroxisomal acyl-CoA oxidase was measured in midgut homogenates and found to be reversibly influenced by longterm fasting and refeeding. The enzyme was immunocytochemically colocalized with catalase in the peroxisomea of the intestinal absorptive cells. Orally administered nervonic and erucic acids were present in the triacylglycerol fraction of the midgut epithelium together with chainshortened intermediates. But they were not detected in the diacylglycerol fraction of the haemolymph and triacylglycerol fraction of the fat body, which only contained chain-shortened intermediates. The prevalence of oleic acid in these three fractions suggests that the very long-chain fatty acids tested are assimilated by chain-shortening on their absorptive pathway across the midgut epithelium.

(8829) FUDALEWICZ-NIEMCZYK, W. & M. OLEKSY, 1992. Pochodzenie i ewolucja skrzydel owadów. – Origin and evolution of insect wings. *Przegl. zool.* 36(1/4): 41-50. (Pol., with Engl.s.). – (Inst. Zool. Stosowanej, Akad. Rolnicza "Hugona Kollataja", Mickiewicza 24/28, PO-30059 Krakow).
Various theories of wing evolution in insects are reviewed and discussed, with emphasis on the paranotal hypothesis. – Cf. also *OA* 2122.

(8830) GASCON, C. & J. TRAVIS, 1992. Does the spatial scale of experimentation matter? A test with tadpoles and dragonflies. *Ecology* 73(6): 2237-2243. – (Second Author: Dept Biol. Sci., B-124, Florida St. Univ., Tallahassee, FL 32306-2043, USA).
The results of a study designed to examine whether the spatial scale of experimentation in artificial ponds (cattle watering tanks) influences the results of manipulative studies of competitive and predatory interactions are reported. The experiment consisted of 2 initial densities of Rana utricularia tadpoles (0.035 and 0.14 animals/L) and the absence or presence (0.005 animals/L) of predatory Tramea lancerata larvae in each of 2 water depths in cattle tanks of equal dimensions. Depth of tank did not significantly affect survival rate of tadpoles either as a main effect or as part of any interactive effect. At low tadpole densities the addition of predators decreased tadpole survival rates significantly, but at high tadpole densities they increased them significantly. Length of larval period increased significantly with increases in the density of surviving tadpoles at similar rates at both water depths, but deeper tanks produced significantly longer larval periods for the same tadpole density. Size at metamorphosis decreased significantly with increases in the density of surviving tadpoles, but it decreased at a significantly faster rate in the shallower tanks. The results indicate that experiments at smaller spatial scales do not necessarily distort the numerical dynamics in this system but that they can overestimate the importance of density variation in producing variation in some phenotypic characters.

(8831) GEISTER, I., 1992. *Poskusni seznam slovenskih imen kačjih pastirjev.* – [*Preliminary list of Slovene vernacular names for dragonflies*]. 4 pp., Geister, Naklo. (Slovene). Circulated at the Charter Meeting of the Slovene Section of the International Odonatological Society (S.I.O.), Ljubljana, Oct. 23, 1992. – (Author & address of the SIO Slovene Section: Pokopališka pot 13, SLO-64202 Naklo, Slovenia).
This is a discussion paper, introducing in Slovene language a strictly binominal vernacular nomenclature for 27 genera and 68 spp.; families and suborders are not considered. All the names are composed by the Author and were never used for dragonfly denomination, either in the press, or in the speech. Nevertheless, the expressions adopted in the "composita" are largely taken from a very genuine folk speech. In the species epitheta, a characteristic feature of the sp. concerned is usually accounted for. – (*Abstracter's Note*: The peculiarity of the proposed system lies in the circumstance that the few previously published (though artificially constructed) vernacular names are hardly considered. – The first Slovene expressions for various dragonfly spp. were created by the renown Slovene naturalist and writer F. Erjavec (1834-1887) and intreoduced, a.o., in the Slovene edi-

tions of various natural history textbooks, as used in the former Austrian Empire, and most of which were authored by the Czech naturalist and pedagogue A. Pokorny (1826-1888), e.g. 1864, *Živalstvo: prirodopis za nižje gimnazije in realke*, Leon, Celovec [=Klagenfurt]; – 1872, *Prirodopis živalstva a podobami, za spodnje razrede srednjih šol*, Matica slovenska, Ljubljana; – etc. Relatively recently, some interesting vernacular names were suggested by L. Šercelj, in his translation of H.W. Smolik's *Das grosse illustrierte Tierbuch*, under the title *Živalski svet*, DZS, Ljubljana, 1967).

(8832) GOGALA, A., M. ALJANČIČ, M. GOGALA & I. SIVEC, 1992. *Žuželke: uspešnost množičnosti.* – *[Insecta: success of the multitude]*. 72 pp., 146 text figs (mostly col.), Prirodoslovni muzej Slovenije, Ljubljana. – ISBN 961-90008-0-3. (Slovene; Engl. ed. in preparation). – Publisher & all Authors: Slovene Mus. Nat. Hist., Prešernova 20, P.O. Box 290, SLO-61001 Ljubljana, Slovenia). – (Orders are also accepted by the SIO Central Office, Bilthoven).
The slim volume (22 x 22 cm) was published in the framework of the temporary exhibit, "Entomologia slovenica", set up (Oct.27-Dec.6, 1992) in the Slovene Mus. Nat. Hist., Ljubljana, under the general supervision of its Director, Academician Prof. Dr M. Gogala (cf. *OA* 8709), assisted by the Past Directors, Drs M. Aljančič and I. Sivec, and in collaboration with various Slovene entomol. research institutions, leading specialists, and a large circle of amateur entomologists, associated with the Slovene Ent. Soc. (SEDŠM). The formal opening coincided with the (19th) "Meeting of Entomologists of the Neighbouring Countries", organized annually by the SEDŠM. In the scientifically well balanced and didactically particularly refreshing concept of the exhibit, the insect world and the science of entomology were reviewed with emphasis on the Slovene fauna and on the past and current entomol. research in Slovenia. – These are also the main subjects of this luxuriously made-up booklet, directed at the general readership and which, in its scope and presentation, certainly is among the significant and noteworthy texts in this field. – The booklet contains several references to, and figs of the odon. (*A. Gogala*, general; *M. Gogala*, vision). Of particular interest is the chapter, contributed by *M. Aljančič*, tracing the history of entomological research in Slovenia from 1542 (P.A. Mattioli, 1501-1577) to present, giving several little known clues for the history of odonatology, and an excellent col. reproduction of Calopteryx virgo padana, from the unpublished graphic art collection of J.W. von Valvasor (1685), of (supposed) Slovene provenience, and which represents one of the best dragonfly presentations in the 17th Century Europe (cf. *OA* 7316, 7706). – For a note on the history of odonatology in Slovenia cf. *OA* 8212.

(8833) *GOMPHUS*. Mededelingsblad van de belgische libellenonderzoekers – Bulletin de liaison des odonatologues belges, Vol. 8, No. 3 (Oct. 2, 1992), No. 4 (Dec. 4, 1992) (Dutch & Fr.). – (c/o Ms A. Anselin, KBIN, 29 rue Vautier, B-1040 Bruxelles).
In addition to the traditional notes, announcements, publication reviews, etc., the following are the larger signed papers: No. 3: *Goffart, P.*: Compte-rendu de l'excursion dans l'Ourthe moyenne le 28 juin 1992 (pp. 47-51); – *Hoste, I.*: [Report on the field trip to Les Epioux, 9 Aug. 1992] (pp. 52-53; Dutch., with Fr.s.). – No. 4: *Goffart, P.*: Note sur le comportement de chasse de Gomphus pulchellus Selys, 1840 (pp. 71-76).

(8834) GORB, S., 1992. Strekoza Hemianax ephippiger Burmeister (Odonata, Aeshnidae) na Ukraine. – The dragonfly Hemianax ephippiger Burmeister (Odonata, Aeshnidae) in the Ukraine. *Acta hydro-ent. latv.* 2: 18-21. (Russ., with Engl.s.). – (Lab. Insect Physiol., Schmalhausen Inst. Zool., Ukrain. Acad. Sci., Lenin St. 15, UKR-252601 Kiev, Ukraine).
In Aug. 1989, several adults and 207 exuviae were recorded at a lake nr the village of Bryuhovichi, Lvov distr. A detailed circumstancial evidence is presented, and a list of 19 other odon. spp. from this locality is given.

(8835) *GRACILE*. [Newsletter of odonatology]. Published by the Kansai Research Group of Odonatology, Osaka, No. 48 (Dec. 6, 1992). (Jap., with Engl. titles). – (Distribution outside Japan: c/o K. Inoue, 5-9, Fuminosato 4-chome, Abeno-ku, Osaka, 545, JA).

Inoue, K.: On scientific names of dragonflies. 1. Let be familiar with scientific names (pp. 1--5); – *Kondoh, S.*: The second generation of Sympetrum depressiusculum obtained by larval breeding (pp. 6-7); – Breeding report of Hydrobasileus croceus (pp. 7-8); – *Matsuki, K.*: Feigning death of larval Coenagrion terue (pp. 9-10); – On the moulting line of some protoneurid larvae (pp. 10-11); – *Yamashita, Y.*: Observation on the emergence of Orthetrum triangulare melania, 2 (pp. 11-12); – *Yamamoto, T., O. Tabata & T. Yagi*: Mortonagrion hirosei discovered at North Kyoto (pp. 12-13); – *Fujimoto, K.*: Mortonagrion hirosei discovered in Fukui prefecture (p. 14); – *Yamamoto, T.*: Sympetrum depressiusculum caught in Osaka prefecture p. 15); – *Azuma, T., K. Aisaka, S. Nishu & T. Aoki*: Sympetrum depressiusculum caught at Setonaikai (Inland Sea) side (pp. 16-17); – *Fujimoto, K. & K. Tani*: Aeschnophlebia anisoptera caught in Gojo City, Nara prefecture (p. 18); – *Nagase, K.*: Additions to the odonate fauna of Amagasaki City, Hyogo prefecture (pp. 19-20); – *Anaze, N.*: Report of survey trip on the odonate fauna of Tahara in Koza-cho, Wakayama prefecture (pp. 21-23); – *Inoue, K., O. Tabata & K. Nagase*: A small record of Odonata at Hasugaike Pond, Wakayama prefecture (p. 24); – *Matsuda, I.*: "Tombo-turi" catching dragonflies by treads meeting held in Osaka prefecture, 2 (pp. 25-27); – *Anaze, N.*: Notes on the small meeting observing crepuscular aeschnid, at Tahara, Koza-cho, Wakayama prefecture (pp. 28-30); – *Aoki, T.*: Report of the survey trip to Oshibuchi, Mie prefecture (pp. 30-32); – *Nishu, S.*: On the mesh data system on "Dragonflies in Kinki District" (pp. 33-35); – *Tani, K. & I. Matsuda*: A 60th birthday celebration party for Mr Kiyoshi Inoue held (pp. 36-37, with a group photograph).

(8836) GRIMMER, F., 1992. *Kurzbericht über die Markierung von Ophiogomphus cecilia (Grüne Keiljungfer) an der Schwäbische Rezat im Jahre 1991*. 13 pp., privately circulated by the Author. – (Gräfenberger Str. 31, D(W)-8500 Nürnberg--10).
A detailed description of O. cecilia habitats in the second order streams of the Schwäbische Rezat, Franconia, Germany. Cf. also *OA* 8774. – (The document is dated 1991, but it was circulated in Sept., 1992).

(8837) HADRYS, H., M. BALICK & B. SCHIERWATER, 1992. Applications of random amplified polymorphic DNA (RAPD) in molecular ecology. *Mol. Ecol.* 1(1): 55-63. – (First Author: Zool. Inst., Univ. Braunschweig, Pockelsstr. 10a, D(W)-3300 Braunschweig).
Molecular genetic markers have been developed into powerful tools to analyse genetic relationships and genetic diversity. As an extension to the variety of existing techniques using polymorphic DNA markers, the Random Amplified Polymorphic DNA (RAPD) technique may be used in molecular ecology to determine taxonomic identity, assess kinship relationships, analyse mixed genome samples, and create specific probes. Main advantages of the RAPD technology include (1) suitability for work on anonymous genomes, (2) applicability to problems where only limited quantities of DNA are available, (3) efficiency and low expense. – Most of the examples in the present paper are based on the evidence from Anax parthenope and Orthetrum coerulescens. – Cf. also *OA* 8492.

(8838) HERMANS, J.T., 1992. *De libellen van de nederlandse en duitse Meinweg. – Dragonflies of the Dutch and German Meinweg area.* Natuurh. Genootschap Limburg, Maastricht. 192 pp., 10 col. pls incl. + coll. illustrated lay-in for identification of the regional fauna. – ISBN 90-74508-01-4. (Dutch, with comprehensive Engl., Germ. & Frs. s's). – Price: Hfl. 48.- net. Available from the SIO, Bilthoven. – (Author: Hertestraat 21, NL-6067 ER Linne).
The excellently produced book, published in 750 copies only, deals with the fauna of a region in the Netherlands/German border area (40 spp.), and is organised into 8 main chapters, viz. "Description of the study area", "The abiotic environment", "The biotic environment", "Description of the water bodies surveyed", "Morphology and life cycle of dragonflies", "Odonate research in the Meinweg area", "The dragonfly fauna of the Meinweg", and "Dragonflies of the Meinweg... towards an uncertain future?". Extensive regional bibliography enhances the value of the work, and a lay-in, col. illustrated key makes it a useful regional fieldguide. Under the species headings, an outline

of ecology, local distribution, status and tentative management measures are stated for each sp. The emphasis on conservation and management increases the value of the book considerably beyond the limited geographic scope of the region it covers.

(8839) HUTCHINSON, R., 1992. Liste annotée des odonates de Charlevoix-Est, Québec. *Fabreries* 17(4): 97-124. (With Engl.s.). – (Cent. Biol. Resour. Res., Agriculture Canada, Ottawa, Ont., K1A 0C6, CA).
Annotated and commented list is presented of 62 spp., 9 of which are for the first time recorded from Charlevoix-Est Co., Quebec, Canada. The composition of the fauna is analyzed; most of the spp. are characteristic of the taiga, and at least 34 spp. have a transcontinental distribution. Some are of southern, or of subarctic origin.

(8840) HUTCHINSON, R. & B. MÉNARD, 1992. Contribution à la biologie de Stylurus spiniceps (Walsh) (Odonata: Gomphidae). *Fabreries* 17(3): 85-93. (With Engl.s.). – (Second Author: 58 rue Smith, Gatineau, Que., J8T 1P7, CA).
The sp. is known from about 10 localities in SW Quebec, Canada. Data on its biology, based on own field observations and on literature, are presented. A fig. of the larval dorsal view is also included.

(8841) JAKOBS, W., 1992. Die derzeitige Libellenfauna im Landkreis Wittenberg und Empfehlungen zu ihrem Schutz. *NatSchutz Sachsen-Anhalt* 29(2): 25-30. – (Thomas-Müntzer-Str. 2, D(O)-4600 Wittenberg-Lutherstadt).
A commented list of 43 spp.

(8842) JENZELEWSKI, K., 1992. *Schmetterlinge und Libellen des Radbodgebietes in Hamm.* 21 pp., Naturschutzbund Deutschland, Hamm. – Available from the Author, at DM 4.- net. – (Eckenerstr. 2, D(W)-4700 Hamm-4).
Commented review of the local fauna (status 1992: 22 odon. spp.), Hamm, Northrhine-Westfalia, Germany.

(8843) JOHANSSON, F., 1992. Predator life style and prey mobility: a comparison of two predatory odonate larvae. *Arch. Hydrobiol.* 126(2): 163-173. – (Dept Anim. Ecol., Univ. Umeå, S-90187 Umeå).
Predation by "slow" life style Cordulia aenea larvae and "fast" life style Leucorrhinia dubia larvae on 2 microcrustaceans differing in mobility was studied in the laboratory. Functional response experiments showed that both predators had lower capture rates on slow-moving Sida crystallina compared with fast-moving Heterocope saliens prey. C. aenea had a higher capture rate on fast-moving Heterocope compared to L. dubia. In contrast, the predators showed no difference in capture rates on slow-moving Sida. A relative capture rate, calculated from functional response experiments, showed that both predators captured more fast-moving Heterocope than slow-moving Sida prey, and that C. aenea captured more Heterocope relative to Sida than did L. dubia. Experiments on encounter rates, handling time, and capture success supported those obtained in functional response experiments in that: (1) both predators had a significantly lower encounter rate with slow moving prey compared with fast, (2) the 2 predators did not differ in encounter rate neither on Sida nor on Heterocope prey, (3) handling time of both predators did not vary with prey type, (4) both predators were more successful in capturing slow-moving prey, (5) L. dubia larvae showed a higher capture success than C. aenea larvae irrespective of prey type. The results on the predation behaviours demonstrated that C. aenea and L. dubia fit well into the slow life style and fast life style respectively.

(8844) KAYSER, C., 1992. Das bodenständige Vorkommen der "Gebänderten Heidelibelle" in der Umgebung Lüneburgs. *Jb. naturw. Ver. Lüneburg* 39: 183-188. – (Rugenbargsweg 52, D(W)-2190 Cuxhaven-1).
20 spp., incl. Calopteryx splendens and Ophiogomphus cecilia (= "serpentinus"), are listed from a stream and 3 ponds nr the village of Deutsch-Evern, SE of Lüneburg. The recent local autochthony of Sympetrum pedemontanum is emphasized, and the northward range expansion of the sp. is briefly discussed.

(8845) *KIMMINSIA*. Newsletter of the United Kingdom National Office of the International Odona-

tological Society (SIO), Vol. 3, No. 2 (Nov. 1, 1992). – (c/o Mrs J. Silsby, 1 Haydn Ave., Purley, Surrey, CR8 4AG, UK).
The announcement of the 12th Int. Sym. Odonatol. (p. 8) and the traditional sections, *"News from members"* (pp. 9-10), *"News from the universities"* (p. 10) and *"Conservation news"* (p. 10), are followed by the following articles: *Davies, A.*: Epiophlebia laidlawi – flying! (pp. 10-11); – *McCabe, E. & L. McCabe*: Three odonatists in Carmine Country [Malawi & Zambia] (pp. 11-12); – *Andress, R.*: Observations on Tachopteryx thoreyi in the Garden State [New Jersey] (pp. 12-13); – *Chelmick, D.*: The continuing northward expansion of Trithemis annulata (pp. 13-14); – *Wilson, K.*: 72 species recorded from Hong Kong (p. 14); – *Endersby, I.*: Some field observations of Hemiphlebia mirabilis (pp. 14-15). – The section, *"Help-Offers, Requests"* (p. 15) concludes this highly interesting issue.

(8846) KOSTERIN, O., 1992. New distribution records of Somatochlora sahlbergi Trybom (Odonata, Corduliidae). *Acta hydroent. latv.* 2: 22-26. – (Last known address: Inst. Biol., Novosibirsk St. Univ., RUS-63000 Novosibirsk).
The sp. is recorded from the Kuraisky Mtn range (SE Altai), the eastern Manyi massif (NE Altai), and from the Koni peninsula (S Magadan region), all Russia. Notes on ecology are added.

(8847) KUHN, K., 1992. Rote Liste gefährdeter Libellen (Odonata) Bayerns. *SchReihe bayer. Landesamt Umweltschutz* 111: 76-79. – (Buchmaiergässchen 2, D(W)-8900 Augsburg).
Red List of the Odon. of Bavaria, Germany, with annotations on habitat, ecology and distribution in the state.

(8848) LEGRAND, J., 1992. Nouveaux Gomphidae afrotropicaux: descriptions préliminaires (Odonata, Anisoptera). *Revue fr. Ent.* (N.S.) 14(4): 187-190. (With Engl.s.). – (Lab. Ent., Mus. Natn Hist. Nat., 45 rue Buffon, F-75005 Paris).
7 new taxa are described and illustrated, viz. Diastatoma gamblesi sp.n. (holotype ♂: Guinée, Mts Nimba, Gouéla, Goué R., 6-VI-1991), Microgomphus jannyae sp.n. (holotype ♂: Guinée, Mts Nimba, Gbakoré, Gba R., alt. 440 m, 1-VI-1991), Onychogomphus emiliae sp.n. (holotype ♂, allotype ♀: Gabon, Makokou, Mpassa, 16-X-1976 and 27-X-1976 resp.), Paragomphus kiautai sp.n. (holotype ♂: Guinée, Mts Nimba, Gbakoré, Gba R., alt. 450 m, 1--VI-1991), P. mariannae sp.n. (holotype ♂: Guinée, Mts Nimba, plateau Zougouépo, Zougué R., alt. 750 m, 14-V-1991, P. tournieri sp.n. (holotype ♂: Guinée, Mts Nimba, Ziéla, Zié R., alt. 500 m, 12-VI-1991), and Tragogomphus christinae sp.n. (holotype ♂, allotype ♀: Guinée, Mts Nimba, Zougué R., alt. 750 m, 20-V--1991 and 18-V-1991 resp.). All material, incl. the paratypes, is deposited in MNHN, Paris.

(8849) LEONG, J.M. & J.E. HAFERNIK, 1992. Hybridization between two damselfly species (Odonata: Coenagrionidae): morphometric and genitalic differentiation. *Ann. ent. Soc. Am.* 85(6): 662-670. – (First Author: Ecol. Grad. Gr. & Dept Ent., Univ. California, Davis, CA 95616, USA).
In allopatry and in a hybrid zone, the relationship between morphometric characters and the inferior abdominal appendage angle was analyzed in Ischnura gemina Kenn. and I. denticollis (Burm.), in order to assess the taxonomic reliability and genetic basis of this trait. Changes in the morphometric-genitalic relationship in the hybrid zone strongly imply that introgression has occurred, although there is some evidence of hybrid unfitness and partial reproductive isolation. It is concluded that the inferior appendage trait is not taxonomically reliable because it fails to convey the recombinant nature of individuals in the hybrid zone. A combination of field and lab data suggest that the genitalic angle trait is polygenic but controlled by only a few genes. In consequence, it is argued for retention of full species status for both spp., despite genetic exchange between them.

(8850) LEONG, J.M. & J.E. HAFERNIK, 1992. Seasonal variation in allopatric populations of Ischnura denticollis (Burmeister) and Ischnura gemina (Kennedy) (Odonata: Coenagrionidae). *Pan-Pac. Ent.* 68(4): 268-278. – (Second Author: Dept Biol., San Francisco St. Univ., San Francisco, CA 94132, USA).
The seasonal variation within the 2 spp. in allopatry is evaluated, in order to determine whether the same morphometric characters will be useful

sp. discriminators in a hybrid zone. Canonical analysis of discriminance reveals that for both spp., early emerging individuals are larger with wider heads than those that emerge later. In addition, each sp. displays other individual patterns of seasonal variation. Both spp. are phenetically distinct despite pronounced seasonal variation; this indicates that the morphometric characters used in this study are potentially suitable for use in diagnosis of hybrid zone individuals.

(8851) *LIBELLULA*. Mitteilungsblatt der Gesellschaft deutschsprachiger Odonatologen (GdO), Vol. 11(1/2). (Nov. 1992). – (c/o Mrs U. Krüner, Gelderner Str. 39, D(W)-4050 Mönchengladbach-4).
Von Hagen, H.: Die Libellen der Ruhraue im Raum Witten (pp. 1-14); – *Kognitzki, S. & N. Schäffer*: Die Libellen des Landkreises Regen: Ergebnisse einer Landkreiskartierung (pp. 15--46); – *Kern, D.*: Beobachtungen an Gomphus vulgatissimus (L.) an einem Wiesengraben der Dümmer-Geestniederung (Anisoptera: Gomphidae) (pp. 47-76); – *Ehmann, H.*: Wiederentdeckung von Stylurus flavipes (Charpentier) in Österreich (Anisoptera: Gomphidae) (pp. 77--80); – *Mauersberger, R. & H. Mauersberger*: Odonatologischer Jahresbericht 1991 aus dem Biosphärenreservat "Schorfheide-Chorin" (pp. 81-86); – *Martens, A.*: Kolonisationserfolg von Libellen an einem neu angelegten Gewässer [Erratum] (pp. 87-88).

(8852) LLOYD, E.C. & S.J. ORMEROD, 1992. Further studies on the larvae of the Golden-ringed Dragonfly, Cordulegaster boltoni (Donovan) (Odonata: Cordulegasteridae), in upland streams. *Ent. Gaz.* 43(4): 275-281. – (Second Author: Coll. Cardiff, P.O. Box 915, Cardiff, CF1 3TL, UK).
This is the continuation of the work listed in *OA* 7548. The distribution of larvae was investigated in moorland streams at Llyn Brianne, W Wales, UK, with emphasis on the impact of foraging conditions. It is concluded that the distinct patterns of microdistribution may represent the result of complex interactions, involving avoidance of intra- and inter-specific competition, predation and increased current velocity. Increased prey abundances in margins may cause aggregations of boltonii larvae, though on the evidence available the individual larvae do not benefit. Structural conditions in margins may also be important.

(8853) [LOHMANN, H.] (Anonymous), 1992. Heiner Lohmann auf Forschungstrip in Griechenland. *Badische Ztg* 47 (234): 31, issue of Oct. 9; (235): 27, issue of Oct. 10 [corrective note]. – (Ziegelackerweg 1, D(W)-7888 Rheinfelden). Refers to the same Research Mission as *OA* 8676, 8726, 8683. Fig. caption is erroneous: the sp. shown is Calopteryx virgo festiva, ♂.

(8854) LÖSING, U., 1992. Vergleichende Untersuchungen der Libellenfauna (Odonata) im Oberlauf der Böhme als Grundlage für Entwicklungs- und Pflegemassnahmen. *Mitt. norddt. NatSchutz Akad.* 3(2): 50-55. – (Janaer Str. 2, D(W)-4500 Osnabrück).
The odon. are considered a powerful tool in the quality assessment of aquatic habitats. In the present study, the odon. community (8 spp.) was examined from the point of view of management of the Böhme R., Lüneburger Heide, Lower Saxony, N Germany.

(8855) MACHADO, A. [B.M.], 1992. *O menino e o rio. Una peça ecológica*. 4 pp., Teatro Francisco Nunes, Casa de Cultura Oswaldo França Junior, Minas Gerais. – (Author: Depto Zool., Inst. Cien. Biol., Univ. Fed. Minas Gerais, C.P. 2486, BR-31270 Belo Horizonte, M.G.).
This is merely a theatre programme pamphlet for the stage performance of the play, based on the work listed in *OA* 7139, and which was on the repertory (at least) throughout Dec. 1992. The "dragonfly" role was performed by ballerina Christiane Schwaner. – The following is a slightly modified text from Author's personal communication to the Editor of *Odonatologica*, dated Dec. 29, 1992: "I adapted my children book, *'The boy and the river'* (now in its 11th edition), for the stage, and the play is now going on with great success at our second largest theatre, in a 2 million cruzeiros production, involving the participation of 32 people. A river and a waterfall with real water were set up on the stage and the dragonfly, a professional ballet dancer, guides the heroes to them at the climax of the play. [...] This is contributing a lot to

increase awareness about dragonflies. For example, for advertising purposes 1000 posters, showing a river and a dragonfly, were affixed in different parts of the city and shown in the main TV channel...". – (*Abstracter's Note*: This is probably only the second dragonfly performance ever put on the stage. For the dragonfly opera, by the Slovene composer P. Merku, cf. *OA* 1637).

(8856) MACHADO, A. [B.M.], 1992. *O velho da montanha: una aventura amazônica.* – [*The old man of the mountain: an Amazonian adventure*]. 100 pp., Melhoramentos, São Paulo. – ISBN 85-06-01597-9. (Port.). – (Author: Depto Zool., Inst. Cien. Biol., Univ. Fed. Minas Gerais, C.P. 2486, BR-31270 Belo Horizonte, M.G.; – Publishers: Comp. Meloramentos, C.P. 8120, BR-05051 São Paulo).
[Slightly modified from Author's personal communication to the Editor of *Odonatologica*, dated Dec. 29, 1992]: „The book tells the story of a boy from Rio de Janeiro, who spends his vacations in the Tirio Indian village in the Amazon, where his father works for a mining company. He becomes friend of 5 Indian children (real personages that I've met when I have visited the tribe), learns a lot about the jungle and the Indian culture from them, and together they rescue the old man (Jon-Chon), the spirit that protects life, whose mountain is destroyed by the Mining Company. – Dragonflies are mentioned 3 times: on p. 31, when wandering through the forest the children see a Mecistogaster preying on a spider (referred in the book as *"progorrô-moí-etimatome" = "dragonfly that captures spiders"*); on p. 44, while going up a stream in a boat the boy observes damselflies (in my mind Hetaerina and Neoneura) including their oviposition behaviour; on p. 69, when Jon-Chon, describing the origin of life on Earth, refers to the time when he had been a Meganeura. – It was only unfortunate that I had no control on the artist, therefore the drawing on p. 32 has no resemblance to a Mecistogaster." – (*Abstracter's Note*: The book is another literary masterpiece in the field of nature and dragonfly conservation, by the Author of the *"O menino e o rio"* [cf. *OA* 7139, 8855]. For the Indian belief re the reincarnation of the spirits of deceased humans in Mecistogaster [!] cf. J.F. Tristan, 1912, *Ent. News* 23: 364).

(8857) MAIBACH, A. & C. MEIER, [Eds], 1992. Anax. *Nouvelles Cent. suises Cartogr. Faune* 3: 21, 4: 17-22. – (First Author: Le Bourg, CH-1610 Oron-la-Ville).
This is the standard section of the Swiss Odonatological Society in the said periodical. For the previous listings cf. *OA* 7861 and 8132. – (No. 3): contains solely a few management notifications and a single title in the Bibliography section (p. 21); – (No. 4): *Monnerat, C.*: Les odonates Jura (pp. 17-20; cf. *OA* 8139 and also 7987, 8504); – [*Maibach, A. & C. Meier*]: Abänderungen des Beobachtungsformular (pp. 20, 21-22); – Bibliographie (p. 20). – Abstracts of the 5th Colloquium of Swiss odonatologists (Basel, Nov. 28, 1992) are scheduled to appear in the forthcoming issue, those of the 4th are listed in *OA* 8132.

(8858) *MALANGPO*. Newsletter of the Thai National Office of the International Odonatological Society (S.I.O.), No. 9 (Nov., 1992). Edited by Bro Dr A. Pinratana. – (Editorial Address: St Gabriel's Coll., 565 Samsen Rd, Bangkok-10300, Thailand; – National Office Address: Dr V. Rojanavongse, Dept Ent., Fac. Agric., Kasetsart Univ., Bangkok-10900, Thailand; – Subscriptions outside Thailand: SIO Central Office, P.O. Box 256, NL-3720 AG Bilthoven).
Michalski, J.: Our trip to Thailand with Brother Amnuay Pinratana (pp. 57-61); – [*Inoue, K.*]: XII International Symposium of Odonatology (p. 62); – (*Anonymous*): The new Head National Office of the S.I.O. in Thailand, Mrs Valuli Rojanavongse (p. 63, with portrait); – *Puangkaeo, S.*: [Dragonfly] water colour painting (p. 63); – *Eak-Amnuay, P.*: Dragonflies and damselflies of Thailand (p. 64; this is the Author's description of the book scheduled to appear in 1993).

(8859) *MARTINIA*. Bulletin des odonatologues de France. Vol. 8, No. 4 (Dec., 1992). – (c/o J.-L. Dommanget, 7 rue Lamartine, F-78390 Bois d'Arcy).
Dommanget, J.-L.: Le mot du Président (pp. 81-82); – *Reiss, T.*: Les odonates de la Petite Camargue Alsacienne (Département du Haut-Rhin) (pp. 83-90); – *Dommanget, J.-L.*: Dix

ans de cartographie des odonates de France: premier bilan (pp. 91-92); – *Hazet, G.*: Observations d'odonates sur l'étang de Loperhet (Département du Morbihan) (pp. 93-94); – *Grand, D.*: Sur la présence de Coenagrion ornatum (Sélys, 1850) dans le département de la Saône-et-Loire (Odonata, Zygoptera, Coenagrionidae) (pp. 95-97); – *Noblecourt, T.*: Deux années d'observations dans le sud-est du département de la Meuse (pp. 99-100); – *Brugière, D. & J. Duval*: Observation de Coenagrion caerulescens (Fonscolombe, 1838) dans le département de l'Aude (Odonata, Zygoptera, Coenagrionidae) (p. 101); – *Dommanget, J.-L.*: Rubrique bibliographique (pp. 102-104).

(8860) MAUERSBERGER, H. & R. MAUERSBERGER, 1992. Fund von Cordulegaster boltoni im Oberlauf der Parthe südöstlich von Leipzig. *Ent. Nachr. Ber.* 36(3): 213. – (Haus am Stadtsee, Postfach 100526, D(O)-1300 Eberswalde).
A local record, with detailed data on water quality, vegetation and morphology of the habitat; SE of Leipzig, Germany.

(8861) MAY, M.L., 1992. Telebasis aurea (Odonata: Zygoptera: Coenagrionidae), a new species of damselfly from Costa Rica. *Ent. News* 103(5): 161-168 (With Span.s.). – (Dept Ent., New Jestey Agric. Exp. Stn, Cook Coll., Rutgers Univ., New Brunswick, NJ 08903, USA).
The new sp. is described and figured and brief notes on its ecology and probable relationships are provided (holotype ♂ in tandem with allotype ♀: Puntarenas prov., peninsula de Osa, 5 mi S of Ricon, 10-VIII-1970; deposited at IORI, Gainesville, FL). Adult male and female keys are given for the 10 hitherto known Mexican and Central American spp.

(8862) MERMOND-FRICKER, F., 1992. Bibliographie concernant la faune entomologique suisse, 1990. *Bull. romand Ent.* 10(2): 85-98. – (Centre suisse Cartogr. Faune, Terreaux 14, CH-2000 Neuchâtel).
Contains 7 odonatol. titles.

(8863) MITRA, T.R., 1992. Note on taxonomic status of five Indian Odonata. *J. Bombay nat. Hist. Soc.* (N.S.) 11(1): 82-85. – (60 Shyan Nagar Rd, Calcutta-700055, India).
The following taxa are synonymised: Agriocnemis nainitalensis Sahni, 1965 = Ischnura senegalensis (Ramb.), – Ischnura bhimtalensis Sahni, 1965 = I. aurora (Br.); – Onychogomphus garhwalicus Singh & Baijal, 1954 = Onychogomphus bistrigatus (Sel.) [cf. M. Hämäläinen, 1989, *Odonatologica* 18: 13-20]; – Crocothemis misrai Baijal & Agarwal, 1955 = Trithemis aurora (Burm.); – and Bradinopyga saint-johanni Baijal & Agarwal, 1955 = B. geminata (Ramb.).

(8864) PAVLIUK, R., 1992. Istoriya izucheniya i sostav faunly strekoz (Odonata) Ukrainy. – The history of investigation and the composition of the Odonata fauna of Ukraine. *Acta hydroent. latv* 2: 27-51. (Russ., with Engl.s.). – (Dept Invert. Zool., Lvov Univ., 4 Shcherebakov St., UKR-290005 Lvov).
History of odonatol. research in the Ukraine is traced from the late 18th century to present. So far ca 70 spp. are known, but the fauna is still not evenly and fully explored. A commented list is given of all the spp., and a comprehensive bibliography is appended.

(8865) PAWELKA, H., 1992. Erfassung, Bewertung und Renaturierungsplanung eines "Lebensraumes aus zweiter Hand" – dargestellt am Beispiel des Sandabbaugebietes "Quarzitwerke Gambach", Wetteraukreis. *Beitr. Naturk. Wetterau* 9[1989] (2): 133-192. – (Author's address unknown).
Contains a commented list of 14 odon spp.; Hessen, Germany.

(8866) PETERS, G., 1992. Koexistenz und relative Häufigkeit von Aeshnidenkolonien im zentralen Mitteleuropa (Anisoptera: Aeshnidae). *Ent. Nachr. Ber.* 36(3): 145-151. (With Engl. & Fr.s's). – (Zool. Mus., Mus. Naturk., Humboldt-Univ., Invalidenstr. 43, D(O)-1040 Berlin).
Some quantitative parameters characterizing the coexistence of aeshnid colonies in central Europe are interpreted using the results of more than 1.000 excursions during 28 years. Aeshna grandis, A. cyanea, A. mixta and Brachytron pratense appear the most generally represented spp in the region. Anax imperator, A. parthenope and Anaciaeschna isosceles, close to the

northern boundary of their range, show a preference for climatically favourable habitats. To an unexpected high extent the existence of aeshnid colonies (excluding Aeshna viridis and subarctica) is promoted by the presence of man-made ponds, pools, ditches, peat-cuttings etc. Due to their preference for very different types of waters the colonies of the "autumn generalists" (A. grandis, A. cyanea, A. mixta) are relatively more abundant and have a longer period of flight activity then their early summer generalist" (B. pratense).

(8867) POLLARD, J.B. & M. BERRILL, 1992. The distribution of dragonfly nymphs across a pH gradient in south-central Ontario lakes. *Can. J. Zool.* 70(5): 878-885. (With Fr.s.). – (First Author: Inst. Wetland & Waterfowl Res., c/o Ducks Unlimited Canada, 9 Havelock St., P.O. Box 430, Amherst, N.S., B4H 3Z5, CA; – Second Author: Watershed Ecosystems, Trent Univ., Peterborough, Ont., K9J 7B8, CA).
Exuviae of 37 spp. were collected from the emergent vegetation of 19 small (< 35 ha) lakes across a pH gradient (range 4.9-8.1) in order to assess the effect of low environmental pH on species richness and diversity. The number of species present in a lake was not significantly correlated with lake pH. 2 measures of diversity (Keefe and Bergersen's TU and McIntosh's *M*) indicate an increase in species diversity with decreasing lake pH. Species shifts in the communities were also correlated with lake pH: five species were apparently excluded from lakes with a midsummer epilimnetic pH below 5.8, and seven species were apparently restricted to lakes with a pH of less than 6.2.

(8868) PONS, P., 1992. Nakamura, pays des libellules. *Le Monde* 14856, p. 4, issue of Nov. 2. – (Author's address not stated).
General impressions from a trip, with reference to the Shimanto Dragonfly Museum. – (Cf. also *OA* 5990, 7424).

(8869) PÖPPERL, R., 1992. Die Besiedlung und Vergesellschaftung der Makroinvertebraten in einem Seeabfluss des Norddeutschen Tieflandes, der Alten Schwentine zwischen Belauer und Stolper See (Schleswig-Holstein). *Drosera* 92(2): 189-206. (With Engl.s.). – (Zool. Inst., Univ. Kiel, Biologiezentrum, Olshausenstr. 40-60, D(W)-2300 Kiel-1).
3 odon. spp. are listed from the Alte Schwentine R., between the Belauer and Stolper lakes, Schleswig-Holstein, Germany.

(8870) POULIN, B., G. LEFEBVRE & R. McNEIL, 1992. Tropical avian phenology in relation to abundance and exploitation of food rescources. *Ecology* 73(6): 2295-2309. – (Dép. Sci. Biol., Univ. Montréal, C.P. 6128, Montréal, Que., H3C 3J7, CA).
The study was conducted at the Araya peninsula, NE Venezuela. The odon. are briefly considered at the order level only.

(8871) POWER, M.E., 1992. Habitat heterogeneity and the functional significance of fish in river food webs. *Ecology* 73(5): 1675-1688. – (Dept Integrative Biol, Univ. California, Berkeley, CA 94720, USA).
Predation by roach (Hesperoleucas symmetricus) and steelhead (Oncorhynchus mykiss) produced strong cascading effects on biota associated with boulder-bedrock substrated in pools of a N California river, but not on gravel-dwelling biota. Enclosure-exclosure experiments showed that fish, by suppressing densities of zygopt. larvae and other small predators, released algivorous chironomids from predation. Chironomids, in turn, dramatically reduced algal standing crops. In contrast, fish had little effect on algae or invertebrates associated with gravel.

(8872) PRASAD, R. & K.I. THOMAS, 1992. C-band pattern homogeneity in dragonflies (Odonata). *Caryologia* 45(1): 57-68. – (First Author: P.G. Dept Zool., Berhampur Univ., Orissa, India; – Second Author: Dept Zool, Science Coll., Hinjillicut, Orissa, India).
The C-band patterns of germinal chromosomes in Ceriagron coromandelianum, C. cerinorubellum, Ischnura senegalensis, Urothemis signata, Tholymis tillarga, Orthetrum sabina, O. luzonicum, O. pruinosum neglectum, Potamarcha congener, Zyxomma petiolatum, Brachydiplax chalybea, Crocothemis erythraea, Trithemis festiva, Hydrobasileus croceus, Rhodothemis rufa, Pantala flavescens, and Tramea basilaris bur-

meisteri, referable to Coenagrionidae, Macrodiplacidae and Libellulidae, have been analysed. In general, the 17 spp. appear to have a very low amount of heterochromatin and are very uniform insofar as the distribution of C-positive heterochromatin is concerned. The C-bands, if present, are located exclusively at the ends of the chromosomes. In no species C-bands at locations other than the ends of chromosomes are observed save the X and the m-bivalent which in many spp. are C-positive for their entire length. The variation, in C-band pattern among different spp., if any, is limited to the size and stain intensity of C-blocks of chiasmatic and/or non-chiasmatic ends in corresponding bivalents. The presence of low amount of heterochromatin extreme regularities in its distribution and limited amount of variation among species indicate that the C-positive heterochromatin has played but a minor role in bringing about species differentiation in odon.

(8873) REDER, C., 1992. Erste Fortpflanzungsnachweise des Zweiflecks – Epitheca bimaculata (Charpentier, 1825) – in Rheinland-Pfalz (Insecta: Odonata). *Fauna Flora Rheinland-Pfalz* 6(4): 1152-1156. – (Am Pfortengarten 37, D(W)-6523 Flörsheim-Dalsheim).
7 exuviae are recorded from the Sippersfelder Weiher (MTB 6413), Rheinland-Pfalz, Germany (18-V/3-VI-1992). It is speculated, the population might originate from Saarland or Lotharingia.

(8874) REDER, G., 1992. Schlupfnachweis der 2. Generation der Frühen Heidelibelle – Sympetrum fonscolombei (Selys, 1840) – in Rheinland-Pfalz (Insecta: Odonata). *Fauna Flora Rheinland-Pfalz* 6(4): 1157-1161. – (Am Pfortengarten 37, D(W)-6523 Flörsheim-Dalsheim).
In the hot 1991 summer, numerous individuals of the [here called] "first generation" (i.e. adult immigrants from the South) were on the wing (Oberrheingraben, Rheinland-Pfalz, Germany) during June 30 - Aug. 3. The so called "second generation" (i.e. locally bread individuals), appeared on Sept. 4 and continued to emerge until Oct. 11.

(8875) REISENWEBER, F., 1992. Erste Ergebnisse der faunistischen Kartierung des ehemaligen Grenzstreifens zwischen Rhön und Vogtland. *Naturschutzreport, Jena* 4: 30-34. – (Landratsamt Coburg, Lauterer Str. 60, D(W)-8630 Coburg).
Ca 35 odon. spp. were recorded, but only the locally noteworthy taxa are listed. These include Leucorrhinia rubicunda and Sympetrum fonscolombei, which were previously not known from northern Bavaria, Germany.

(8876) RÖHN, C., 1992. Beitrag zur Ökologie der beiden Quelljungfernarten Cordulegaster boltoni (Donovan 1807) und C. bidentatus Selys 1843 unter besonderer Berücksichtigung syntoper Vorkommen (Odonata: Cordulegastridae). *Jh. Ges. Naturk. Württemberg* 147: 229-323. – (Mettnauweg 4, D(W)-7990 Friedrichshafen).
3 cases of the co-occurrence of the 2 spp. in SW Germany were studied systematically, and a breeding C. boltonii population is evidenced for the first time in the Tübingen area.

(8877) ROWE, R.J., 1992. Larval development in Diplacodes bipunctata (Brauer) (Odonata: Libellulidae). *J. Aust. ent. Soc.* 31(4): 351-355. – (Dept Zool., James Cook Univ., Townsville, Qld 4811, AU).
D. bipunctata was raised in the laboratory from egg to final instar. Changes in external morphology during development are described. Comments are made on oviposition and on seasonality patterns in Australia and New Zealand.

(8878) RYAZANOVA, C., & C. MAZOKHIN-PORSNYAKOV, 1992. Spatial behaviour of the larvae of Calopteryx splendens Harris (Odonata) and its sensory support. *Acta hydroent. latv.* 2: 52-60. – (Dept Ent., Fac. Biol., Lomonosov St. Univ., RUS-117234 Moscow).
The behaviour of the late instar larvae was studied in aquaria in 1984-1991. Marked individuals were monitored visually and filmed. The obtained significant results are discussed. The spatial behaviour of the larvae of this species has revealed homing and territorial competition. It has been found that the larvae remain for many days at a selected site where they invariably return after regular night trips. When searching for a cover, the larvae essentially rely on current direction. Supplementary means in direction finding are illumination and geomagne-

tic field. The geomagnetic field appears to be constantly used by the larvae for a landmark. The territorial competition of final-instar larvae is described. It is supposed that territorial dominance not only of larvae but also of adults is determined by the state of the individual's reproductive system rather than body size. Spatial interactions of individuals have been studied. The locomotor reactions of the larvae in contact are considered as one of the possible mechanisms of mutual identification and spatial dispersion. The territorial competition of the larvae is regarded as a stage of imaginal territorial competition, of no functional significance for the larvae.

(8879) SHIMIZU, N., 1992. *Dragonflies*. Published by the Author, Nagoya. 72 pp., over 80 col. phot. incl., col. frontispiece, hard cover (22 x 30 cm), protective case. – ISBN none. (Jap., with Engl. title & taxonomic nomenclature). – Available from the SIO, Bilthoven, at Hfl. 125.- approx. A simple titel of a very special book! It is a collection of over 80 odon. field photographs; save for the captions, there is hardly any text. The quality of the motifs is absolutely superb and the information they present is of the kind that has been but seldom recorded photographically. Only a few examples can be listed here, e.g. various ♂ behavioural features in Rhipidolestes okinawanus, Psolodesmus mandarinus kuroiwae, Calopteryx japonica, egg dropping in Onychogomphus viridicostus and Davidius moiwanus (eggs visible!), copula Sympetrum croceolum ♂ x S. speciosum ♀, "triple connection" Lestes sponsa ♂ – L. temporalis ♂ – ♀, Sympetrum croceolum covered with hoar-frost in the dormitories and attracted (also group-wise) by snow patches (4 photos), etc. In the informative captions, the exact dates are also stated. – The book was published in a limited edition of 500 copies ony. – The *Abstracter* would be inclined to assume he is familiar with a great deal of published photographic works on dragonflies. Among these, there are certainly quite a few matchless photographs, but he is not aware of anything resembling the present Shimizu's collection as such.

(8880) SIEDLE, K., 1992. Libellen: Eignung und Methoden. *In*: J. Trauter, [Ed.], Arten- und Biotopschutz in der Planung: methodische Standards zur Erfassung von Tierartengruppen, pp. 97--110, Margraf, Weikersheim. – ISBN 0935--6258 – [*Ökologie in Forschung und Anwendung*, Vol. 5]. – (Schmiedtorstr. 6, D(W)-7400 Tübingen).
The methodology of odonatol. data collecting for the water quality assessment is described in some detail.

(8881) SINGH, U.N., 1992. Food and feeding behaviour of selected aquatic insects. *Environ. & Ecol.* 10(2): 473-474. – (Aquacult. Res. Lab., P.G. Dept Zool., M.S. Coll., Motihari-845401, India).
Incidental laboratory observations, mostly on the predation on anisopt. larvae by Sphaerodema molestum (Heteroptera: Belostomatidae).

(8882) SPURIS, Z., 1992. Die Geschichte der Taxonomie der Odonaten. I. Die in dem XVIII Jahrhundert beschriebenen Arten der Odonaten. *Acta hydroent. latv.* 2: 74-80. (With Engl.s.). – (Miera iela 19-6, LV-2169 Salaspils).
In the 18th century, 16 authors described 129 spp., 50 of which are now reduced to synonymy. The largest number of names (41) were proposed by J.C. Fabricius, 24 of which are still valid. The species list, with the synonyms, is provided, but the bibliography is missing.

(8883) SPURIS, Z., 1992. Jaunas zinas par spāru (Odonata) izplati Latvijas centrālajā dalā. – New data on the distribution of dragonflies (Odonata) in central Latvia. *Acta hydroent. latv.* 2: 61-73. (Latvian, with Engl.s.). – (Miera iela 19-6, LV--2169 Salaspils).
This is a sequel to the paper listed in *OA* 7557, covering the period, 1989-1991. 36 spp. are recorded from 80 localities.

(8884) SPURIS, Z., 1992. [Literatūras apskats]. Opuscula zoologica fluminensia. *Acta hydroent. latv.* 2: 89-90. (Latvian). – (Miera iela 19-6, LV--2169 Salaspils).
Briefly annotated odon. titles in the issues Nos 58-86.

(8885) SPURIS, Z., 1992. [Literatūras apskats]. Tsuda, S., A distributional list of world Odonata [...]. *Acta hydroent. latv.* 2: 86-88. (Latvian). –

(Miera iela 19-6, LV-2169 Salaspils).
A comprehensive review of the volume listed in *OA* 8012.

(8886) SPURIS, Z., 1992. [Literatūras apskats]. Watson, J.A.L. [et al.], The Australian dragonflies [...]. *Acta hydroent. latv.* 2: 85-86. (Latvian). – (Miera iela 19-6, LV-2169 Salaspils).
A comprehensive review of the volume listed in *OA* 8155.

(8887) [STERNBERG, K.] SCHETAT, D., 1992. Karlson-Preis an Klaus Sternberg. *Biologie heute* 403: 11. – (c/o Dr K. Sternberg, Schillerstr. 15, D(W)-7513 Stutensee-4).
Incidental article on Dr K. Sternberg's PhD work on moor dragonflies (cf. *OA* 7688), for which he has received the 1992 Karlson-Award of the Association of German Biologists (Verband Deutscher Biologen).

(8888) STICKNEY, D., 1992. *Water bugs and dragonflies – explaining death to children.* 24 pp., Mowbray, London. – ISBN 0-264-66904-5. – (Publishers: Villiers House, 41/47 Strand, London, WC2N 5JE, UK).
The little booklet (14.5 x 10.5 cm) attempts to explain to children the phenomenon of death in a delightfully simple way. By using the analogy of the dragonfly short life in water as man's time on Earth and their emergence as airborne insects into the bright sunlit world above the water as man's life after death, the Author effectively conveys her belief that life's most basic truths are found in a simple story. The booklet also contains advice for parents, as well as christian prayers for both parents and children, and is illustrated with black-and-white drawings by G. Ortiz. – (*Abstracter's Note*: The sole other booklet using dragonflies as a parabole in christan religion is perhaps that by P.-A. Robert, 1962, *Les libellules sont une parabole*, Delachaux & Niestle [La Nature et la Bible], Neuchâtel).

(8889) *SYMPETRUM*. Revue d'odonatologie, No. 6 (1992). – (c/o C. Deliry, 17 rue Diderot, F-38000 Grenoble).
Zannoni, C.: Editorial (pp. 3-6); – *Grand, D.*: Sur la présence de Gomphus simillimus, Anax parthenope et Oxygastra curtisi en Saône et Loire (7) (pp. 7-9); – A propos de Coenagrion coerulescens (Fonscolombe, 1838) dans les Pyrénées orientales (pp. 11-12); – *Hytte, G.*: Chiroptérologue, odonatologue, ornithologue (pp. 13-15); – *Deliry, C.*: Contribution à la connaissance des libellules de la Crau (pp. 17-22); – *Groupe de Recherche et de Protection des Libellules "Sympetrum"*: Liste Rouge des libellules manacées de l'Isère. Etat 1992 (pp. 23-27); – *Deliry, C.*: Les libellules du Marais de Lavours (alt. 232 m) (Ain): statut, écologie et relation avec le milieu tourbeux (pp. 29-79); – (*Anonymous*): Publications du G.R.P.L.S. depuis le Sympetrum No. 3 (p. 80).

(8890) *TOMBO. ACTA ODONATOLOGICA*. Published by the Society of Odonatology, Tokyo, Vol. 35, Nos 1/4 (Dec. 25, 1992). – (c/o Dr S. Asahina, Takadanobaba 4-4-24, Shinjuku-ku, Tokyo, 169, JA).
Eda, S.: Submerged oviposition of Calopteryx japonica (frontispiece col. phot., p. 1); – *Asahina, S.*: A taxonomic revision of Erythromma najas group in Northeast Asia (pp. 2-10); – Mortonagrion hirosei discovered from Hong Kong (p. 10); – *Fukui, M.*: Record of the dragonflies taken in Siberia, pt 1 (pp. 11-22); – *Matsuki, K. & Y. Hirose*: Description of the larva of Coenagrion hylas (Trybom, 1889) from Japan (Coenagrionidae, Odonata) (pp. 23-26); – *Matsuki, K.*: Description of the larva of Chlorogomphus brevistigma okinawensis Ishida (Cordulegastridae) (pp. 26-29); – *Inoue, K.*: Information on XII SIO Symposium to be held in Osaka in 1993 (p. 30); – *Suzuki, K.-J., K. Saitoh & J. Sawano*: Male germ-line chromosomes of Davidius moiwanus sawanoi Asahina & Inoue, 1973 (Anisoptera: Gomphidae) (pp. 31-32); – *Arai, Y.*: Record of an extremely melanized female of Orthetrum triangulare melania (pp. 33-34); – Notes on the egg-period and immature larval characters of Oligoaeschna pryeri Martin (pp. 34-36); – *Asahina, S.*: [Book Review] Odonata of Levant, by H.J. Dumont (p. 36); – *Yamaguchi, M.*: Aquatic environment of Polycanthagyna melanictera larva (pp. 37-40); – Record of the emergence of Sympetrum frequens from a garden pond (p. 40); – *Miyakawa, K.*: Observations of Sympetrum frequens Selys inhabiting forest canopies in lowland Sayama Hills during summer. III. Survey of

1992 covering adjacent areas (pp. 41-44); – *Rai, T.*: Notes on Sympetrum frequens observed during 1990-1992 at northwestern area of Chiba (p. 44); – *Asahina, S.*: 1992 observations on the seasonal prevalence of several Sympetrum species in Tokyo area (pp. 45-46); – *Aoki, T.*: Larvae of Ictinogomphus pertinax hibernated in Kobe, Hyogo prefecture (pp. 47-49); – A dwarf specimen of Sympetrum uniforme (p. 50); – *Shiraishi, K.*: Flight time of Planaeschna ishigakiana nagaminei (p. 50); – *Watanabe, K.*: Seasonal habitat segregation of two dragonfly species in Ishigaki Island (pp. 51-52); – *Yamamoto, T.*: Supposed oviposition behaviour of Lyriothemis tricolor (p. 52); – *Sonehara, I.*: Confirmation of the presence of Aeschna mixta in Azumi plain (p. 53); – Sympetrum baccha mutatinum breeding in highland waters (p. 53); – Rearing of a highland population of Sympetrum frequens (pp. 54-55); – *Watanabe, Y.*: On the eggs, newly hatched and second instar nymphs of Stylurus oculatus Asahina. Preliminary report (pp. 55-56); – *Eda, S.*: [Book Review] Dragonflies, by N. Shimizu (p. 56); – *Ubukata, H., K. Higashi, S. Nomakuchi & Y.-I. Chu*: Ecological distribution of dragonflies in the forest ecosystems of north and middle Taiwan. I. List of dragonflies collected in 1990 (pp. 57-61); – *Eda, S.*: Annual meeting of the Society of Odonatology, 1992, held in Tokyo (p. 62).

(8891) TROCKUR, B., 1992. Bemerkungen über Libellen am Gartenteich. *NatSchutz Saarland* 22(3): 14-15. – (Schulstr. 4, D(W)-6695 Tholey-Scheuren).
Directed at the general reader, dragonfly succession in garden ponds in Germany is briefly outlined.

(8892) TYAGI, B.K., 1992. Control of malaria vectors in India. *Indian Rev. Life Sci.* 12: 211-238. – (Reg. Med. Res. Cent., I.C.M.R., P.O. Box 122, New Pali Rd, Jodhpur-342005, India).
Vector control methodologies as practiced at governmental and non-governmental levels in India are described with a background of the past efforts and with suggestions for a future approach. Although the odon., such as Bradinopyga geminata and Crocothemis servilia, have been very effectively used for the control of container-breeding mosquitoes in some other SE Asian countires (cf. e.g. *OA* 3195, 7421, 8151), any such experiment is still lacking in India. – For mosquito control by the odon. in Cuba cf. *OA* 6099.

(8893) VAN BUSKIRK, J., 1992. The Odonata of Isle Royale, Michigan. *Great Lakes Ent.* 25(1): 41-45. – (Dept Zool., North Carolina St. Univ., Raleigh, NC 27695-7617, USA).
Annotated list is given of 50 spp. recorded from Isle Royale National Park, NW Lake Superior. The fauna is typical of the North American boreal regions. The list includes 9 new spp. for the island, while Aeshna juncea is new for Michigan, USA.

(8894) VARZINSKA, R., 1992. [Literatūras apskats]. Advances in Odonatology, Vol. 5. [...]. *Acta hydroent. latv.* 2: 91-93 (Engl.). – (Miera iela 19-6, LV-2169 Salaspils).
A comprehensive and critical review of the volume listed in *OA* 8211. Since it contains the proceedings of a symposium, the Author is of the opinion, the omission of the names of the participants and the titles of all presentations (for both of which cf. *OA* 7997) notably reduces the value of the book.

(8895) VINOGRADOV, A.E., 1992. Patterns of DNA orientation in insect sperm: evolutionary convergence. *Caryologia* 45(2): 105-121. – (Inst. Cytol., Acad. Sci., CIS-194064 St Petersburg, Russia).
49 insect spp. of 9 orders (incl. 12 odon. spp. of 6 fam.) and 6 non-insect spp. were studied by means of polarized fluorescence microscopy in order to estimate the diversity of the DNA package fashions. It is possible to distinguish 5 main groups of DNA orientation patterns in relation to the sperm head axis: nearly isotropic, low perpendicular, low parallel, moderate parallel, high parallel. One and the same order includes, as a rule, 2 or more groups of sperm DNA orientation. All the groups, except for the last, are heterogeneous. The last type of DNA package (group V), with the orientation of DNA molecules nearly parallel to the sperm head axis, represents so far unexplainable evolutionary convergence. It occurs in Aeshnidae (Odonata), Acrididae and Gryllidae (Orthoptera), Aphro-

phoridae (Hemiptera) and Tenthredinidae (Hymenoptera) insects, whereas their close relatives have quite different DNA orientation patterns. In general, approximately from the level of a family and higher, it is difficult to trace any correlation between the sperm DNA orientation patterns and the insects taxonomy. On the other hand, there is certain relationship between the changing of DNA orientation during spermiogenesis and the phylogenetic transformation of DNA orientation in sperm. – Cf. also *OA* 4384.

(8896) *WALKERIA*. Newsletter of the Canadian National Office of the International Odonatological Society, Vol.7, No. 1/2 (Dec., 1992). – (c/o Ms N.L. House, Dept Biol., Carlton Univ., Ottawa, Ont., K1S 5B6, CA).
Pritchard, G.: Buena suerte y mala suerte en Costa Rica (pp. 1-3; in Engl.); – [*House, N.L.*]: SIO Rapid Communications (Supplements) available for Quebec Odonata (p. 3); – *Kukalova-Peck, J.*: [Call for information on North American aboriginal "dragonfly" names] (p. 3); – *Kiauta, B. & M. Kiauta*: Canadian dragonfly bibliography (pp. 3-5); – *Kiauta, B.*: Revision of Cordulegastridae (pp. 5-6; note on the paper listed in *OA* 8725); – [*Inoue, K.*]: XII International Symposium of Odonatology, International House, Osaka, 1-8(11) Aug. 1993 (p. 6). – (*Abstracter's Note: Walkeria* 6(1) is listed in *OA* 8595; 6(2) has not been published).

(8897) WARD, J.V. & B.C. KONDRATIEFF, 1992. *An illustrated guide to the mountain stream insects of Colorado*. xii+192 pp., Univ. Press Colorado, Niwot. – (Second Author: Dept Ent., Colorado St. Univ., Fort Collins, CO 80523, USA; – Publishers: Univ. Press Colorado, P.O. Box 846, Niwot, CO 80544, USA).
The odon. are rarely encountered in the Colorado mountain streams. Ophiogomphus severus is the only sp. known to occur in high-gradient mountain streams there. A good fig. of the larva (dorsal view) is shown on p. 150.

(8898) WASSCHER, M., 1992. *Libellen in het herinrichtingsgebied Schoonbeek*. – [*Dragonflies of the Schoonbeek restructuring area*]. 48 pp., N.B.L.F. Consulentschap, Assen. (Dutch). – (Author: Minstraat 15 bis, NL-3582 CA Utrecht; – Publishers: N.B.L.F., Consulentschap Drenthe, P.O. Box 146, NL-4900 AC Assen).
A commented list of 29 spp., Drenthe prov., the Netherlands, recorded in 1991. Calopteryx splendens, Erythromma viridulum, Ischnura pumilio, Ceriagrion tennelum and Libellula fulva are of particular local interest.

(8899) WASSCHER, M., 1992. *Libellen in het hoogveenreservaat het Bargerveen*. – [*Dragonflies of the Bargerveen rised bog nature reserve*]. ii+114 pp., Staatsbosbeheer, Pesse. (Dutch). – (Author: Minstraat 15 bis, NL-3582 CA Utrecht; – Publishers: Staatsbosbeheer Drenthe-zuid, Oostering 22, NL-7933 TM Pesse).
A comprehensive analysis is presented of the fauna (27 spp.) of a rised bog area in the Drenthe prov., N Netherlands, and it is compared with the odon. faunae of 17 similar areas in Germany and in the Netherlands. Of national importance is a strong population of Ceriagrion tenellum, at the moment the largest known in the country. In addition to the detailed field notes and comprehensive literature discussion under the heading of each sp., chapters are added on the local vernacular names, odon. colonisation and succession in man-made habitats, and on predation on dragonflies by the Red-backed Shrike (Lanius collurio). The concise analyses of various types of habitats and the tentative management suggestions enhance the general value of the work.

(8900) WERZINGER, S. & J. WERZINGER, 1992. *Zweiter Zwischenbericht über Planbeobachtungen an der Grünen Keiljungfer (Ophiogomphus cecilia) im Bereich der Aurach, Lkr. Neustadt/ Bad Windsheim, Mittelfranken*. Abt. Ökol. heim. Libellen, Naturh. Ges. Nürnberg. xvi+14 pp. – (Authors: Zwernberger Weg 29, D(W)-8500 Nürnberg-60).
Sequel to the report listed in *OA* 8596, dealing with the results of capture-mark-recapture studies on 560 ♂ and 15 ♀.

(8901) [WESTFALL, M.J.] (Anonymous), 1992. A portrait of the people. Minter and Margaret Westfall. *Gainesville Sun*, issue of Sept. 6, p. 1D. – (c/o Prof. Dr M.J. Westfall [residence]: 1616 NW 7th Place, Gainesville, FL 32603, USA).

Col. portrait of Prof. & Mrs Westfall, in a local daily, with a brief biographic note (settled in Gainesville in 1947, Professor at the University of Florida during 43 years). – Since his retirement from the University, Prof. Westfall continues his odonatol. work as Director of the International Odonata Research Institute (IORI/DPI, 1911 SW 34th St., Gainesville, FL 32608, USA) and as Head of the United States National Office of the SIO.

(8902) WOHLERS, R., 1992. *Libellenkartierung an Flachgewässern einer stillgelegten Tongrube bei Rettmer im Landkreis Lüneburg*. 38 pp., 3 maps excl., FreilandUnters. Ökol./Umweltbildung, Univ. Lüneburg. – (Alter Hessenweg 12a, D(W)-2120 Lüneburg.
Annotations on 20 spp. from an abandoned claypit, distr. Lüneburg, Germany.

(8903) ZAIKA, V. & O. KOSTERIN, 1992. Some interesting observations of dragonflies (Odonata) in South Tuva. *Acta hydroent. latv.* 2: 81-84. – (Second Author: Inst. Biol., Novosibirsk St. Univ., RUS-63000 Novosibirsk).
An account is given of observations in the N part of the Ubsu-Nur hollow, S Tuva, 1990. The adult Ophiogomphus are intermediates, resembling O. serpentinus by coloration and O. reductus by the shape of the lower anal app. New records extend the known range of Coenagrion lanceolatum in Siberia to the S, and that of Aeshna affinis to the E.

(8904) ZHOU, W., H. WU & Z. ZHOU, 1992. New species and record of Gomphidae from China. *J. Zheijang Forestry Coll.* 9(4): 392-401. (Chin., with Engl.s. of spp. descriptions). – (Dept Ent., Zheijang Mus. Nat. Hist., Gu-shan, Hang Zhou-310012, P.R. China).
7 new taxa are described an illustrated, viz. Nihonogomhus chaoi Zhou & Wu sp.n. (holotype ♂: Gutianshan, Keihua Co., Zheijang prov.; 25-V-1990), N. montanus Zhou & Wu sp.n. (holotype ♂: same locality; 1-IV-1990); N. silvanus Zhou & Wu sp.n. (holotype ♂: Hangzhou, Zheijang prov.; 1-VI-1973), Anisogomphus fujianensis Zhou & Wu sp.n. (holotype ♂: Wuyishan, Fujian prov.; 15-VI-1975), A. yunnanensis Zhou & Wu sp.n. (holotype ♂: Wandingzhen, Yunnan prov.; 5-VI-1983), Trigomphus yunnanensis Zhou & Wu sp.n. (holotype ♂: Kunming, Yunnan prov.; 2-V-1983), and Davidius fruhstorferi simaoensis Zhou ssp.n. (holotype ♂: Simao Co, Yunnan prov.; 10-V-1983). The types are deposited in Authors' institution.

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(8905) ANSORGE, J., 1993. Insektenfundstellen im Oberen Lias und der Unterkreide. *Natur & Museum* 123(1): 31-34. – (Linienstr. 148, D(O)-1040 Berlin).
A brief review is given of the insect-bearing Upper Liassic and Lower Cretaceous deposits, with references to the Odon., and with a wing phot. of Zirzipanagrion quadriordinum Zessin (cf. *Odonatologica* 20[1991]: 97-126).

(8906) *ARGIA*. The news journal of the Dragonfly Society of America, vol. 4, No. 4 (Feb. 1, 1993). – (c/o T. Donnelly, 2091 Partridge Lane, Binghamton, NY 13903, USA).
Donnelly, N. & J. Michalski: Watch out – it's going to explode (pp. 2-5; on a Thailand trip); – *Alrutz, R.*: Dragonfly feeding swarms (pp. 5-6); – *Barlow, A.E.*: New Jersey collecting (pp. 6-7); – *Orr, R.L.*: A day in Colorado (pp. 7-9); – *Barlow, A.*: An eastern odonatist on the loose in Colorado (pp. 9-10); – *Michalski, J.*: Trinidad gathering deferred (p. 10); – *Dunkle, S.W.*: Update on the dragonflies and damselflies of the Explorama facilities, Peru (pp. 10-11); – *Orr, R.*: Celithemis amanda from Texas (p. 11); – *Orr, R.L.*: Oregon in '93 (pp. 11-12); – *Orr, R.*: The $ 10,000 dragonfly (pp. 12-13); – *Donnelly, N.*: Attend the 1993 Adirondack gathering (p. 13); – Endangered Odonata: 1992 version (pp. 13-14). – The issue contains also a few book notices, editorial notes and a request for bibliographic assistance.

(8907) ASAHINA, S., 1993. *A list of the Odonata from Thailand*. Bosco Offset, Bangkok. No consecutive pagination, ca 460 pp. – ISBN none. – Available from the SIO, Bilthoven, at approx. Hfl. 120.- net.
Under this title, during 1982-1990, the Author published a series of 21 papers that have appeared in a variety of Japanese periodicals, and are listed in *OA* 3937, 4280, 4920, 4921, 4970,

4883, 5034, 5114, 5210, 5303, 5367, 5368, 5531, 5588, 5761, 5912, 5978, 6109, 6624, 7175, and 7694. The somewhat "modest" title is misleading; the series does not represent merely a "list", it is rather an authoritative and energetic technical treatment of the taxa then known from Thailand (242 spp.), incl. descriptions of new taxa, redescriptions, synonymy, countless records, redefinitions of the status of various taxa, etc., on ca 400 pp., accompanied by almost 1100 figs. The photostatic reprint of this material forms the bulk of the present volume. The remaining ca 50 pp. contain the reproductions of 7 other Author's papers dealing with the Thai fauna. Since some Thai spp. were dealt with in various Author's generic revisions or other papers which are not reprinted here, 2 pp. of a bibliographic "guide" to the treatment of these are added. – The technical reproduction of text and line drawings is good, that of the wing photographs is somewhat inferior. The binding and the attractive cover design makes the work a very presentable book. – In his brief "Introduction" the *Author* is telling on his involvement in the odonatological research in Thailand during more than 3 decades. Since the original journal treatment was not designed as a balanced monograph of the regional fauna, he was initially hesitant when approached with the idea to reprint the work in a book edition. The *Editor*, Dr A. Pinratana, however, in his editorial "Foreword", is stating the reason for his desire to re-issue the work, i.e. to make the parts that were published in less easily available periodicals readily available to all interested. To some extent he succeeded in this objective. – The *Abstracter* is of the opinion, it would be useful if the title of the book would have been restyled in a way to cover appropriately the actual scope of the work. For the sake of convenience it would be also useful if, in addition to the original journal pagination of the reprinted papers, the consecutive pagination throughout the book would be added. This would enable the Editor to produce a detailed contents table, which would certainly facilitate the use of the book. – The work shows one serious omission. The papers published originally in the obscure Japanese lepidopterological periodical, *Chô-Chô*, which ceased publication some years ago and which is hardly available in any library outside Japan, do not show bibliographic references to the journal. These are listed in *OA* 4921, 4970, 5034, 5114, 5210, 5367, 5368 and 5531, and the user wil lhave to copy the data from there.

(8908) GEISTER, I., 1993. *Kačji pastirji Šturmovcev pri Vidmu pri Ptuju, Slovenija (Odonata).* – [*Dragonflies of Šturmovci-pri-Vidmu near Ptuj, Slovenia (Odonata)*]. Report for the City Council, Ptuj. 7 pp. (Slovene). – (Pokopališka 13, SLO-64202 Naklo, Slovenia).
A commented list of the fauna, with data on local adult phenology and habitat preference for 27 spp.; Ptuj distr., NE Slovenia.

(8909) GRIFFITH, M.B. & S.A. PERRY, 1993. The distribution of macroinvertebrates in the hyporheic zone of two small Appalachian headwater streams. *Arch. Hydrobiol.* 126(3): 373-384. – (West Virginia Cooperative Fish & Wildlife Unit, Div. Forestry, P.O. Box 6125, W Virginia Univ., Morgantown, WV 26506-6125, USA).
Lanthus parvulus is listed from a stream in the Mononghala National Forest, nr Parsons, Tucker Co., W Virginia, USA.

(8910) GRODNITSKIY, D.L., 1993. On the adequacy of criticism of the problem of modeling of the wing apparatus of insects. *Ent. Rev.* 71(6): 52--56. – (Author's address not stated).
This is the Engl. ed. of the Russ. paper that has appeared in *Ent. Obozr.* 70(1991): 946-949, and represents Author's reply in the polemics on his work with M.V. Kozlov and M.V. Nesina, published in *Usp. sovr. Biol.* 105(1988): 284-299. It briefly comments on several Russian publications dealing with the air flow around dragonfly wings, and on the papers listed in *OA* 5170 and 6641.

(8911) *HAGENIA*. Mitteilungsblatt des Nationalen Büros der SIO in der Bundesrepublik Deutschland und der GdO, No. 5 (March 1, 1993). Edited by M. Schorr & U. Krüner. Subscription orders outside Germany to the SIO Central Office, Bilthoven.
The 13th International Symposium of Odonatology will be convened in Essen, Germany (Organising Secretary: Prof. Dr Eb. Schmidt, Biologie Didaktik, FB 9, Univ. Essen, Postfach 103764, D(W)-4300 Essen). – In addition to

numerous announcements, various notes and detailed reports on various regional and national meetings, the following are the main signed articles: *Kotarac, M.*: Gründung der Slowenischen Sektion der SIO (p. 1); – *Raab, R.*: Österreichische Arbeitsgemeinschaft Libellen (ÖAL) (pp. 1-2); – *König, A.*: Richtlinie 92/43/EWG des Rates vom 21. Mai 1992 zur Erhaltung der natürlichen Lebensräume sowie der Erhaltung der wildlebenden Tiere und Pflanzen (pp. 2--3); – *Höppner, B., U. Reinhard & R. Buchwald*: Schutzgemeinschaft Libellen in Baden--Württemberg (p. 5); – [*Schorr, M.*]: Libellenkartierung in Bayern (pp. 5-6, 18); – *Holzinger, W.E.*: Kartierung der Libellen der Steiermark (Österreich) (p. 8); – *Schorr, K. & G. Reder*: Aeshna affinis und Sympetrum meridionale 1992 in Rheinland-Pfalz (p. 11); – *Fliedner, H.*: Erythromma viridulum nun auch in Bremen (pp. 11-13); – [*Schorr, M.*]: Libellen an der Sauer zwischen Metzdorf und Wintersdorf (Lk. Bitburg-Prüm/Rheinland-Pfalz) (p. 13); – Epitheca bimaculata wieder in Bayern (p. 13); – Libellen und Musik (pp. 14-15); – *Rudolph, R.*: Über Society-Libellen (pp. 15-16); – [*Krüner, U.*]: Libellenkurse 1993 (p. 16; detailed programs of 4 odonatol. workshops in Germany); – [*Schorr, M.*]: Thecagaster bidentata (p.17). – (*Abstracter's note*: In the article of Kotarac, the original text of which was submitted in Engl., there are a few errors in geographic names, etc., viz. the "benachbarte Regionen der östlichen Alpen und der Adria" are to be understood as the countries/regions of the "Alpen-Adria Arbeitsgemeinschaft"; – for the "Julianische Alpen" read "Julische Alpen"; – the famous holiday resort, Bled, is situated of course in "Oberkrain" (= Upper Carniola) in Slovenia rather than in "Unter-Kärnten" (=Lower Carinthia) in Austria).

(8912) LEGRAND, J., 1993. Une nouvelle Macromia du groupe paula Karsch des Monts Nimba en Guinée, Afrique occidentale (Odonata: Corduliidae). *Opusc. zool. flumin.* 107: 1-6. (With Engl.s.). – (Lab. Ent., Mus. Natn. Hist. Nat., 45 rue Buffon, F-75005 Paris).
M. lamottei sp.n. is described and illustrated from a single specimen (holotype ♂: Guinea, Nimba Range, Gbakoré, Gba R., alt 450 m, 26--VI-1991; deposited in MNHN, Paris). It is compared with M. bicristulata Legrand. At present, the paula group includes 6 spp., viz. bicristulata, bispina, kimminsi, paula (= bicornis) and villiersi sp.n.

(8913) *LIBELLULA*. Mitteilungsblatt der Gesellschaft deutschsprachiger Odonatologen (GdO). Vol. 11, No. 3/4 (Dec. 1992; published Feb. 1993). – (c/o Mrs U. Krüner, Gelderner Str. 39, D(W)--4050 Mönchengladbach-4).
Jödicke, R.: Die Libellen Deutschlands. Eine systematische Liste mit Hinweisen auf aktuelle nomenklatorische Probleme (pp. 89-112); – *Clausnitzer, H.-J.*: Gomphus vulgatissimus (L.) an der Aller (Anisoptera: Gomphidae) (pp. 113--124); – *Janetzky & C. Ritzau*: Zur Verbreitung von Libellen im Einzugsgebiet der Hunte (Niedersachsen) (pp. 125-140); – *Kuhn, J.*: Artenhilfsprogramme für Libellen in Südbayern: Nehalennia speciosa (Charpentier), Aeshna subarctica elisabethae Djakonov, Aeshna isosceles (Müller) und Libellula fulva Müller (Zygoptera: Coenagrionidae; Anisoptera: Aeshnidae, Libellulidae); – *Mauersberger, R. & H. Mauersberger*: Odonatologischer Jahresbericht aus dem Biosphärenreservat "Schorfheide--Ghorin" für 1992 (pp. 155-164); – *Krüner, U.*: Der Südliche Blaupfeil, Orthetrum brunneum (Fonscolombe), am Linken Niederrhein (pp. 165-170); – *von Hagen, H.*: Die Libellen der Ruhraue im Raum Witten: Nachtrag 1992 (pp. 171-174); – *Holzinger, W.E.*: Die Libellenfauna der Mur-, Sulm- und Lassnitauen des Leibnitzer Feldes (Steiermark, Österreich) (pp. 175-180).

(8914) *LINDENIA*. Notiziario dell'Ufficio Nazionale Italiano della Società Odonatologica Internazionale, Roma, No. 19 (Jan. 1, 1993). – (c/o Prof. Dr C. Utzeri, Dipto Biol. Anim. & Uomo, Univ. Roma "La Sapienza", Viale dell'Università 32, I-00185 Roma).
The most significant item in this issue is the announcement and a detailed description of the operation of a centre, at the National Office, for registration and documentation of Hemianax ephippiger occurrence in Italy (pp. 84-85). Of considerable relevance are also the abstracts of the current Italian faunistic publications (pp. 85-86).

(8915) MILLER, P.L., 1993. Some dragonflies of the Budongo forest, western Uganda (Odonata). *Opusc. zool. flumin.* 102: 1-12. – (Dept Zool., Univ. Oxford, South Parks Rd, Oxford, OX1 3PS, UK).
A report is presented of observations made at the local streams between 5-17 Sept. 1992. 9 zygopteran and 17 anisopteran spp. were identified, the commoner of which are divisible into 3 groups according to where they were reproductively active: (1) those restricted to densely shaded regions of streams (9 spp.); – (2) those active in sun-flecked areas of streams close to shade (4 spp.); and – (3) those active only in regions of the streams or at small pools well exposed to the sun (6 spp.). Several of the spp. observed are primarily west African in their distribution.

(8916) MÜLLER, R.A. & M. HÄMÄLÄINEN, 1993. Onychogomphus treadawayi n.sp., eine neue Libellenart von der Insel Busuanga, Philippinen (Odonata: Gomphidae). *Ent. Z., Essen* 103(4): 41-45. (With Engl.s.). – (First Author: Rehetobelstr. 99, CH-9016 St Gallen).
The new sp. is described and illustrated from a single ♂ (the Philippines: Busuanga Is., Coron, Mabentangen R., 4/7-V-1991; deposited in coll. R.A. Müller, St. Gallen).

(8917) PINRATANA, A., 1993. Foreword. *In*: S. Asahina, A list of the Odonata from Thailand, 1 p. (unnumbered), Bosco Offset, Bangkok. – (St Gabriel's Coll., 565 Samsen, Bangkok-10300, Thailand).
Editor's foreword in the book listed in *OA* 8907.

(8918) [SPURIS, Z.], 1993. Pusgadsimts zoologijā. – [Half of a century in zoology]. *Izglītība, Riga* 1993(1) [2334]: 12-13. (Latvian). – (Miera iela 19-6, LV-2169 Salaspils, Latvia).
A very comprehensive interview with the Latvian odonatologist, Dr Z. Spuris, in a Latvian national weekly. A portrait is included.

(8919) TYAGI, B.K., 1993. Alternative control strategies for mosquito vectors of human deseases in India. *In*: O.P. Agarwal, [Ed.], Perspectives in entomological research, pp. 159-172, Scient. Publishers, Jodhpur. – (Reg. Med. Res. Cent., I.C.M.R., P.O. Box 122, New Pali Rd, Jodhpur-342005, India).
Excellent review, with a brief reference to the papers listed in *OA* 3195 and 6437, but no original data on the odon. application are presented. – Cf. also *OA* 6099.

(8920) WISSINGER, S., & J. McGRADY, 1993. Intraguild predation and competition between larval dragonflies: direct and indirect effects on shared prey. *Ecology* 74(1): 207-218. – (First Author: Biol. Dept, Allegheny Coll., Meadville, PA 16335, USA).
Manipulative field experiments were conducted in artificial ponds to quantify the predatory impact of larvae of the migratory Tramea lancerata on the resident Erythemis simplicicollis, Enallagma aspersum and Ischnura verticalis. It was found that the combined predatory effects of the 2 Anisopt. on the Zygopt. were not additive. To determine the underlying cause of non-additive predation rates in the field, a second experiment was conducted in laboratory aquaria to isolate the impact of each predator on the consumption rates of the other. Dragonfly consumption rates of damselflies in single-predator treatments were compared to those in the presence of heterospecifics or conspecifics with their menta (mouthparts) surgically modified so that they could not capture prey. – In the laboratory experiment, de-mented Tramea reduced the consumption rates of Erythemis to less than half of that observed when Erythemis foraged alone. Erythemis numbers were also reduced by Tramea predation. Erythemis had neither effect on Tramea. Both of the negative effects of Tramea on Erythemis will have indirect positive effects on damselflies. The "behavioral" component (reduced Erythemis foraging rate) should be more important than the "trophic link" (reduced Erythemis numbers) indirect effect. Together these indirect positive effects will allay, but not completely compensate for, the direct negative effects of Tramea predation on damselflies. – These results illustrate how an asymmetric potential for intraguild predation can lead to asymmetries in interference competition and to non-additive effects on prey mortality. The addition or removal of predators that interact in this manner to or from communities should have only a small net effect on prey because of compensating direct and indirect ef-

fects. This may explain why predator manipulations have often had unpredictable or undetectable effects on freshwater benthic communities. – Cf. also *OA* 7875.