Selysia

A NEWSLETTER OF ODONATOLOGY

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B. ELWOOD MONTGOMERY DIES

by

Minter J. Westfall, Jr.

The well-known odonatologist and member of honor of S.I.O., Prof. Dr. B. Elwood Montgomery, known to many of us as Monty, died January 19 at the age of 83. For those of our readers who have ODONATOLOGICA Vol. 2, No. 2, a tribute will be found there which was given to him on his 75th birthday. My long correspondence with Dr. Montgomery began in 1941 when I was a student at Rollins College. I had a nice visit with him and his wife for several days of research in Lafayette in 1959. Some of us remember attending the excellent colloquium on Odonata which he organized at Purdue University in March of 1963. I recall with pleasure his presence at the international symposia of S.I.O. held in Gainesville and Montreal in 1977 and 1979 respectively.

Monty phoned me on January 1 and we had a long and pleasant conversation. He told me of his illness and said he was sending me his punch card index of the literature from 1800 to 1976 for use in Gainesville. He asked me to take his catalog of the Odonata and find someone who would put the finishing touches on it for publication. Little did I think then that he would be gone so soon for he sounded bright and cheerful and had hopes of recovering to work again on the Polythoridae.

His wife, Esther, called me on January 19 to say that he had passed away during the day. Margaret and I called Bastiaan Kiauta in Utrecht with the news, and had flowers sent for the funeral. Esther wrote January 23, "First of all, I wish to thank you and the International Society of Odonatologists for the beautiful arrangement of white glads, white mums, and red anthuriums which came." She also sent a clipping from the Lafayette

SELYSIA

A Newsletter of Odonatology

Compiled at
Department of Zoology
University of Florida
Gainesville, Florida 32611

by

Minter J. Westfall, Jr.
and
Margaret S. Westfall

This newsletter is designed to disseminate facts and news about the activities of Odonatologists and Odonatology. It is not intended as a journal nor an organ for the publication of articles or technical papers. The name is based upon that of the "Father of Odonatology," Baron Edmond de Selys Longchamps. Founded in 1963 by Dr. B. Elwood Montgomery at Purdue University, SELYSIA is now issued semiannually, March 1 and September 1.

Journal-Courier of January 20 which is here quoted in full for those who haven't seen it. The article was accompanied by a photograph of Dr. Montgomery.

"Dr. Basil Elwood Montgomery, 83, of 906 N. Chauncey St., WL, professor emeritus of the Purdue University entomology department, died at 11:10 a.m. Wednesday in St. Elizabeth Hospital. He had been hospitalized since Jan. 12 and in failing health three months.

Born and reared in Posey County, he was a 1918 graduate of Poseyville High School. Dr. Montgomery, a 1922 graduate of Oakland City College, received his master's degree from Purdue in 1925 and his Ph.D. from Iowa State University in 1936. In 1978, he received an honorary doctorate of science degree from Oakland City College.

His teaching career spanned nearly 60 years and included elementary, secondary and university levels. He was affiliated with Purdue for 39 years, and after retiring in 1968, was a professor and lecturer at Marian College, Indianapolis, and Frostberg State College (Maryland).

Described by colleagues as a "total scientist" and a scholar, besides being a teacher, he was an outstanding researcher. He wrote more than 100 scientific articles on dragonflies, bees, nectar production, clover production and entomological history. His work and interest in science continued during retirement.

Dr. Montgomery gained international recognition as an authority on bees and dragonflies. Under the auspices of a Fulbright Grant in 1949-50, he specialized in research on bumblebees and pollination as it affected cloverseed production at Cawthorn Institute in New Zealand.

His research on the biology of bees extended to the Arctic region in a program at Point Barrow, Alaska, supported by the Office of Naval Research. He related this expertise through extension work by conducting programs with the Indiana Beekeepers. As a world authority on dragonflies, he made numerous trips to major museums in Europe. He organized the first two International Colloquia on Dragonflies.

Dr. Montgomery was a member of First United Methodist Church of West Lafayette, F&AM Lodge 723, Royal Archmasons, Knights Templar, Royal and Select Masons, Hi 12 Club and was past patron of Order of Eastern Star 507. He also was a member of Lafayette Noon Optimist Club, Tippecanoe County Retired Teachers Association, Indiana Academy of Science, Tippecanoe County Genealogical Society, Tippecanoe County Historical Society; and Sons of the American Revolution.

Also, Entomological Society of America, American Association for the Advancement of Science, Sigma Xi and Society Internationale Odonatological (sic. Societas Internationalis Odonatologica).

In 1930 he was married in Oakland City to Esther Barrett, who survives.

Also surviving is a daughter, Mrs. Emily Alward of West Lafayette."

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POLYCHROMATISM IN FEMALE AESHNIDAE

by

Sidney W. Dunkle
Bureau of Entomology
Division of Plant Industry
Box 1269
Gainesville, Florida 32602

In connection with the preparation of a Field Guide to the North American Dragonflies, I have reviewed the available information on color phases of Nearctic species of the closely related genera Aeshna, Basiaeshna, and Oplonaeschna. Non-acetoned specimens of these species often turn brown and lose other colors and even their pattern. I find that nearly pure acetone is necessary to preserve colors in these insects. However, in comparing notes made on live specimens with well acetoned specimens of female Basiaeschna janata, Aeshna canadensis, and A. eremita, I was mortified to discover that some colors had changed in all 3 species. Green can change during acetoning (and probably any drying process) to either blue or yellow, and blue can change to either yellow or yellow-green. Apparently yellow markings remain yellow.

Among the specimens examined, four female A. canadensis were intermediate between homo- and heterochromatic in life, but one became homochromatic when dried. Among three female A. eremita, one changed from homochromatic to intermediate when dried, and one which was intermediate became heterochromatic. Thus I conclude that most of the literature records of polychromatism in aeshnids are suspect, unless data were stated to have been taken from life.

I believe that yellow colors in dragonflies are produced by yellow pigment, whereas blue (except pruinose and metallic blue) is caused by the Tyndall scattering of light by granules in the epidermal cells. The Tyndall blue becomes darker when the granules move away from the exterior surface of the epidermal cells at cool temperatures. Green (except metallic green) is produced by the combination of yellow pigment and light-scattering granules in epidermal cells. In teneral Aeshna the Tyndall blue is present first, then if yellow pigment is genetically produced, the markings change to green or even yellow. I gather that acetoning changes the distribution of granules in the epidermis, resulting in the color changes noted above. I still recommend acetoning, because it certainly preserves most colors much better than just drying

specimens in air, but notes on color should be taken from life whenever Tyndall blue or green is present.

Here is my present understanding of polychromatism in female Basiaeschna, Oplonaeschna, and Nearctic Aeshna:

Basiaeschna janata - abdominal spots blue or green, eyes similar in both color phases.

Oplonaeschna armata - abdominal spots blue, green or yellow, eyes in green or yellow females dark brown above and pale brown below.

Aeshna - Of the 20 species of Nearctic Aeshna (N of Mexico), no females with mostly blue abdominal spots (homochromatic) are known in six - umbrosa, persephone, mutata, verticalis, clepsydra, and psilus. Only blue females are certainly known in tuberculifera. Only green females are known in umbrosa and persephone. Most species have a blue and a green form (green-yellow, green, or yellow-green). Some also have intermediate females with blue lateral spots and green dorsal spots. A. constricta and A. interrupta have three color forms - blue, green, or yellow.

The eyes of blue female Aeshna are usually similar to the male's, but are gray instead of blue in multicolor. Heterochromatic female Aeshna lack blue in the eyes, except that blue is present in interrupta and mutata. Eye color is not recorded for male or female verticalis, sitchensis, and septentrionalis, and for female clepsydra and psilus.

I would greatly appreciate any information on body or eye color in aeshnids that the reader can provide from notes made from live specimens or color photographs. I will provide the information I have to anyone who can help so that gaps in our knowledge can be filled and the Field Guide made more complete.

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ABSTRACTS OF DOCTORAL DISSERTATIONS BY S.I.O. MEMBERS

THE EVOLUTION OF REPRODUCTIVE STRATEGIES IN A DRAGONFLY, PACHYDIPLAX LONGIPENNIS

by

Karen Joyce Sherman
Cornell University
Ithaca, New York, 1983

Pachydiplax longipennis is a medium sized libellulid dragonfly which is found throughout North America and Mexico. I studied the reproductive behavior of this species at two ponds in Aiken, South Carolina during the summers of 1979 to 1981.

Pachydiplax longipennis males defended small mating and oviposition territories from conspecific males. These territories contained floating or shallow submerged vegetation which females used as oviposition sites. The amount of floating vegetation in territories was experimentally altered in 1981; results of these manipulations showed that females preferred to deposit eggs in territories with abundant vegetation. Manipulations also showed that males were more likely to defend areas with greater amounts of vegetation.

Daily male mating success was limited by low female visitation rates and by male abundance at breeding sites. The duration of pond visits and the tenure time in a particular territory were inversely related to the number of males at a breeding site. Large males (40 mm in total body length) had higher daily mating success than other males. Since fighting ability was

size related, large males were able to defend successfully territories with the highest female visitation rates.

In most cases, a male guarded his mate while she oviposited in his territory. A male which hovered above his mate and repulsed intruders could both maintain his territory and decrease the amount of interference to his mate, allowing her to oviposit an average of three times longer than unguarded females. Because females were scarce and multiple matings were common (suggesting that sperm competition was likely), noncontact guarding appeared to be an effective method for territorial males to maximize the number of eggs they fertilized.

Nearly half of all territorial males visited several different territories in a single day. Essentially all males visited multiple territories over the course of their lifetime while some males visited several ponds as well. Because males probably have limited ability to detect microhabitats which are favourable for egg and early instar survival, males which mate and fertilize eggs in several territories should minimize the probability that no offspring survive to reproduce.

THE EFFECT OF WATER TEMPERATURE ON EMBRYONIC AND LARVAL DEVELOPMENT OF COENAGRION PUELLA L. FROM A POND AT HERZOGENBURG (LOWER AUSTRIA)

by

Johann Waringer
University of Vienna, Austria, 1982
(Author's synopsis of original German text, 69 pages)

(1) The effect of temperature on egg and larval development of the palearctic zygopteran damselfly Coenagrion puella L. was investigated at constant temperature conditions in the laboratory and in the field. Females were observed during oviposition at a pond at Herzogenburg (Lower Austria). Eggs were collected and bred in the laboratory at temperatures of 4,8,10, 12,14,16,18,20,24 and 28°C and at photoperiods between ten hours light and continuous light. At 4,8 and 10°C the eggs did not develop. The hatching success was the best at 16°C (85–100%) and was 15% at 12°C and 26 - 42% at 28°C.

(2) The time required for embryonic development decreased with increasing temperature in the range of 12 - 28°C: the time for completing embryonic development was 80 days at 12°C and 12 days at 28°C. The relationship between hatching time and water temperature in the range of 12–28°C was well described by a power law.

(3) The length of the period in which eggs were actually hatching was approximately the same at all temperatures (mean period: 8 days).

(4) Experiments made in the field for control purposes showed that there was a good agreement between the estimates and the actual hatching time in the field. Therefore the data obtained in the laboratory are also applicable to field conditions.

(5) Larvae of C. puella were bred ex ovo at the same constant temperatures as the eggs. A small number of larvae was also bred in the field.

(6) Without counting the prolarva, 11 instars were observed. The average body length increment and head width increment per moult was proportionately constant at approx. 26% and therefore Dyar's rule was applicable. The relation-

ship between dry weight and body length was well described by a power law. Moult intervals decreased with increasing temperature from the first to the seventh instar (29 days at 12°C, 7 days at 28°C) and the relationship between the two parameters was described by a power law. From the eighth to the final instar the moult intervals were approximately the same (range 30–48 days).

(7) Larval growth in the laboratory was well described by the logistic growth model. Larval growth was also expressed in terms of the absolute and specific growth rate. The specific growth rate had the maximum value immediately after the hatching of the first instar and decreased with increasing age of the larva; therefore, Minot's law was applicable.

The mean specific growth rate (% length increment day^{-1}) was 0 at temperatures below 12°C, had a peak at 29°C (2.1% length increment day^{-1}) and decreased again with increasing temperature. The water temperature was clearly the main factor influencing larval growth in the laboratory.

(8) A few experiments were also performed in the pond to test the adequacy of the estimated values for larval growth at different temperatures in the laboratory. There was agreement between the estimates and the actual growing rates in the pond. Therefore, the values from the laboratory are probably applicable to larval growth in the field.In the field only 10 instars were observed.

(9) Females were caught in the field for obtaining data of the potential fecundity of the species. Females which had not yet started oviposition contained 330–400 eggs.

During one year, larvae were collected from the pond; together with data from larvae bred in the pond and by using the results from the laboratory experiments, the samplings in the field have shown that C. puella has a totally univoltine life cycle at the study area. According to Corbet's classification (Corbet, 1960), C. puella is considered to be a summer species.

THE EVOLUTION OF DRAGONFLY LIFE HISTORIES IN HETEROGENEOUS ENVIRONMENTS

by

Timothy G. Halverson
University of Maryland, 1983

Recent interest in life history evolution has focused on the importance of environmental heterogeneity. In particular, traits such as iteroparity, diapause, and migration are seen as evolutionary responses to inequities in conditions "here and now" versus "elsewhere" or "later." Predictability of temporal fluctuations has been viewed as an important factor directing the evolution of life history traits which cope with temporal variability. Here I use a system of pond breeding dragonflies (Odonata:Anisoptera) to inspect the extent to which spatial predictability may be an equally important factor directing the evolution of life history traits which cope with spatial heterogeneity.

Extensive spatial and temporal variation in emergence was documented for six species of dragonflies at five ponds in the Shenandoah Mountains of western Virginia over a four year period. Significant spatial and temporal variation in reproductive input to ponds was also found for four of the species. However, variation in

reproductive input accounted for only a small portion of the variation in adult production, demonstrating the importance of factors affecting the aquatic stages of the life cycle. Individuals of two of the species (Aeshna tuberculifera Walker and Plathemis lydia Drury) were reared in replicate enclosures in each of the ponds to monitor hatching success, larval survival, and larval growth. These experiments verified the existence of extreme spatial and temporal variability in survival of eggs and larvae. The nature of this variability was such that relative pond quality shifted between years for both species placing a selective premium of dispersal in this system.

Correlations between reproductive input to ponds and estimates of pond quality (provided by the enclosure experiments) indicated a difference between P. lydia adults and A. tuberculifera adults in their ability to discriminate among ponds. P. lydia realized a 15% increase in mean hatching success as a result of breeding selectively at better quality ponds, while A. tuberculifera adults improved hatching success of their offspring only 4%.

Thus the concept of predictability was applicable to spatial heterogeneity and helped explain life history differences between the species. P. lydia produced larger numbers of smaller eggs which were deposited in large clutches at a single pond. This "spatial semelparity" is consistent with the higher spatial predictability afforded this species by adult habitat selection behaviors. A. tuberculifera on the other hand, produced fewer, larger eggs and distributed them in smaller batches, often at different ponds, (i.e. "spatial iteroparity") thus spreading the risk of total reproductive failure over a number of unpredictable habitats.

STUDIES ON THE MATING BEHAVIOR OF SOME SPECIES OF ZYGOPTERA (ODONATA) AND DROSOPHILA (DIPTERA)

by

Hugh M. Robertson
University of Witwatersrand
Johannesburg, South Africa, 1982

Dr. Robertson is currently at the University of Wisconsin but no abstract has been received.

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THE SIO LIBRARY AND ARCHIVES

On various occasions and at various places notes were published referring to the SIO Library and to the SIO Library Xerox Service, hence the majority of our membership is well aware of the existence of this institution within our Society. Brief reports on the situation of the Library are also regularly submitted by the Librarian and by the Editor of Odonatologica at the biennial Plenary Business Meetings of the Society, but the majority of the SIO membership is probably not familiar with the details concerning the scope, operation, acquisitions and future planning. The SIO Archives have received even less "publicity", therefore it is worthwhile to give here a brief outline of the operation of these SIO institutions.

The SIO Library has been established immediately upon the foundation of the Society, in 1971. For the time being, it is still located at the seat of the Editorial Office in Utrecht. It contains several thousands of reprints, xerox copies, and odonatological books. In addition, there

are a number of general entomological periodicals, which are regularly sent to the Editor of Odonatological Abstracts, and most of which have accumulated now to a considerable number of volumes. It is the objective to move the Library to the (SIO) International Research Center of Odonatology as soon as it will become operative.

The Society has never had any spare funds for the purpose of library acquisitions, therefore the library is almost entirely depending on donations. The first of these was that by Dr. B.F. Belyshev (1971), and the most substantial so far was that by Dr. E.J. Kormondy (1976). While some of our members are sending the reprints of their current work and/or duplicates from their private libraries, the most regular and substantial source of acquisitions is the deposition of xerox material, after it has been used for the preparation of Odonatological Abstracts. Currently, this "editorial source" probably accounts for more than a hundred bibliographic units annually.

In spite of the continuous increase in volume, the Library space is not (yet) a serious problem, and we hope soon to be able to have our own Library Room in the Center. The administration of the material, however, poses great difficulties. At the moment, all the publications (reprints, xerox copies, and books) are arranged alphabetically (and per author chronologically), but a proper up-to-date card index is lacking, as the manpower in Utrecht is insufficient to take care of this.

As a matter of course, along with the Library also goes the complete stock of SIO periodicals, and of the "editorial reprints" of papers published in the SIO journals.

Next to the Library, the SIO Archives is considered a very important institution of our Society. At present it is also located in Utrecht, and will be moved to the Center along with the Library. Aside from the material relative to the history (etc.) of SIO, the Archives is the place for accumulation of any unprinted or unpublished material related to Odonatology and Odonatologists, such as correspondence, manuscripts, files, photographs, films, slides, tapes, etc.

In order to give an impression of the nature of the material the Society is collecting for the Archives, here follows a brief list of some of the recently received items:

1. Collection of portraits of the 19th and early 20th century Russian odonatologists (from Dr. B.F. Belyshev).
2. A set of "family photographs" and portraits of the famous 19th century Swiss worker L.R. Meyer-Dur, obtained from his family (from I.E. Siegenthaler and O.R. Strub).
3. Colour slides of J. Cowley and F.C. Fraser (from Dr. E. Pinhey).
4. Extensive handwritten notes, by M. Wright, for a master key to Odonata of North America (from Dr.E.J. Kormondy).
5. The original correspondence, Jurzitza/Teyrovsky (1960-1978) (from Dr. G. Jurzitza).
6. Xerox copies of complete correspondence Laidlaw/Lieftinck (1927-1963; 300 letters approx.) (from Dr. M.A. Lieftinck).
7. Tapes of the Armstrong/Corbet discussion on the New Zealand Odonata (from Dr. P.S. Corbet).
8. Several thousands of bibliographic cards (many with annotations of the contents of

the publications concerned), partly in handwriting by various well-known workers (From Dr. E.J. Kormondy).

9. A set of C.H. Kennedy's odonatological Book plates and xerox copies of his correspondence on them (from Dr. M.A. Lieftinck).
10. "Reception Books" (i.e. signatures of attendants) of the Colloquia of Dutch Dragonfly Workers (1970-1979) (from Dr. B. Kiauta).
11. A xerox of Dr. B.E. Montgomery's unpublished "List of names proposed for species and categories of lower rank in the Odonata" (from Dr. D.A.L. Davies, with permission of the author).
12. Movie on the courtship display etc. in Rhinocypha unimaculata from Nepal (on "permanent loan", from Dr. J. M. Van Brink).

Aside from the Xerox Service, which is largely (though not entirely) based on the SIO Library material, the Library is continuously and very intensively used by the members, who often come to Utrecht for this purpose. Numbers of our members from e.g. Britain, Canada, Denmark, Germany, South Africa, United States, etc. have spent various lengths of time in the SIO Library: anything between a few hours and up to two weeks.

In view of the very positive experience with the ("central") Library, the Society is now considering to establish small local National Office Libraries, which are going to contain a complete set of the SIO periodicals and other publications, and xerox copies of the respective regional literature and of the "key" odonatological publications. The (proposed) SIO Field Research Stations, the first of which is likely to be set up in Thailand, will also be equipped with such local library material. At the same time, as heretofore, these local SIO "dependencies" are to function as local centra for gathering the local material needed for both the Odonatological Abstracts and the SIO Library and Archives.

In order to keep the membership informed on the growth of our library and archives funds, brief Reports of annual acquisitions will henceforth appear regularly in Selysia.

Last but not least, if you have any material that you would be willing to donate, or to give on a "permanent loan" or in safekeeping to SIO Library and Archives, please do not hesitate to do so. Needless to say, this would be one of THE ways to ensure that your material will be properly kept, and that it will continue to be used to the advantage of Odonatology, also by the generations of workers to come.

If you would decide to give any material, under any of the above specified conditions, to SIO, it would be useful if you would inform the Editorial Office of Odonatologica about your intention and the approximate volume of the material, before the actual shipment. Although the Society would be happy and thankful to receive any material and at any time, in view of the advanced stage of our preparations for the (SIO) International Research Center of Odonatology (in Florida), it would be useful - provided this would not cause any extra difficulties to you - if our members in the United States and Canada would wait with the shipment until the material could be directed to Florida rather than to Utrecht. It goes without saying that in case such a delay would cause you any difficulties, the Society would be happy to store the material

temporarily in Utrecht, shipping it to Florida along with the rest of the collection, when the time for this will come. — B. Kiauta

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WOMEN IN ENTOMOLOGY

Women in Entomology is a newsletter available to anyone interested in learning about the ideas, concerns and activities of women in the field of entomology. The newsletter is printed in January and June of each year. To have your name added to the mailing list write to: Women in Entomology, c/o Dr. D. M. Calabrese, Dept. Biol., Dickinson College, Carlisle, PA 17013.

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ROBERT GAMBLES HONORED

The editors of SELYSIA have learned that one of the long-time members of S.I.O., Robert M. Gambles, recently received the Stamford Raffles Award for 1982 for his work on Odonata. This award is given to an amateur zoologist for distinguished contributions to zoology. All members of S.I.O. wish to extend hearty congratulations to Robert Gambles for this well-earned distinction.

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FRASERIA

Newsletter of the
Indian National Office of SIO

Number 3 of the Indian National Office of S.I.O. Newsletter dated December 1, 1982 contains a notice of the meeting of the first All-Indian Conference on Odonatology to be held in early 1984. The S.I.O. India Office is extending a cordial invitation to all individuals and their families interested in Odonata throughout India to attend. The invitation includes persons from other parts of the world, as well, and anyone interested in attending should contact the Secretary of the Organizing Committee, Dr. S. Mathavan, School of Biological Sciences, Madurai Kamaraj University, Madurai - 625 021, Tamil Nadu, India (phone 33171, ext. 44).

FRASERIA also includes an interesting note abut the work of Dr. B. K. Tyagi. He is writing a review article on the recent advances in Indian odonatology, and he is planning to include a section on the dragonfly vernacular names on the Indian subcontinent. Dragonfly "songs" also exist, and the author requests colleagues kindly to inform him of dragonfly names and songs known to them.

A review of the book FIELD ECOLOGY, ZOOGEOGRAPHY AND TAXONOMY OF THE ODONATOLOGY OF WESTERN HIMALAYA, INDIA, by A. Kumar & M. Prasad, Occ. Pap. Zool. Surv. India 20: 118 pp, 1981 was prepared by Dr. Tyagi and appears in this number of FRASERIA. The reviewer states that this is the first attempt, since F. C. Fraser's works, to cover a wide range of aspects about dragonflies from the Western Himalaya.

* * * *

GENERIC SYNOPSIS

by

Prof. Dr. D. A. L. Davies
Crofton Lodge
8, Drury Lane
MORTIMER, Reading, Berks. RJ7 2JL
England

Societas Internationalis Odonatologica Rapid Communication No. 3 was a synopsis of the world's genera. It was presented as a provisional essay and is now being

revised to provide a second impression. Many changes have been made following suggestions by many specialists.

Anyone interested to contribute ideas before the new version is finalised, please send in their views to the author, or Professor Kiauta. We would welcome views about families, subfamilies, tribes, definitions, good and bad genera, subgenera, and so forth.

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NOTE FROM PHILIP CORBET

Philip Corbet (Department of Biological Sciences, The University, Dundee, DD1 4HN, U.K.) wishes to thank those readers of SELYSIA who have favoured him with copies of their publications, and to ask all odonatists to send him copies of their work as promptly as possible because he is now actively reviewing work for inclusion in the book he is now preparing on the biology of dragonflies.

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ADDITIONS AND CHANGES TO LIST OF S.I.O. MEMBERS
(see SELYSIA, V. 11, #1, #2)

(Starred * names are those of new members).

AUSTRALIA

*Reeves, Mr. Deniss M.
G.P.O. Box 1220
Brisbane, Qld. 4001

AUSTRIA

Waringer, Dr. Johann
Salzberggasse 16/4
A-1140 Wien

CANADA

Baker, Dr. Robert
Biology Department
Erindale College
University of Toronto
Mississauga, Ontario L5L 1C6
*Hellebuyck, Mr. Victor
1277 Lincoln
Sherbrooke, Quebec J1H 2H8
*Herman, Dr. T. B.
Biology Department
Acadia University
Wolfville, Nova Scotia B0P 1X0
Suzuki, Dr. K. (to August 1983)
c/o Dr. Ryuichi Matsuda
Biosystematics Research Institute
Canada Department of Agriculture
K. W. Neatby Building
Central Experimental Farm
Ottawa, Ontario K1A 0C6
*Walker, Mr. Dave
125 Parkway Forest Drive
Apt. 1106
Willowdale, Ontario M2J 1L9

CHINA

People's Republic of China
Gui, Hong
Department of Biology
Nanjing Teacher's College
122 Ning Hai Road
Nanjing

Chao, Dr. Hsiu-fu
Laboratory of Biological Control
Dept. of Plant Protection
Fujian Agricultural College
Fuzhou, Fujian
Zhou, Wen-Bao
Zheijang Museum
Hang Zhou
*Zhu, Dr. Hui-qian
Department of Biology
University of Shanxi
Taiyuan, Shanxi Province

Republic of China
Chiang, Prof. Judy Ju-hu
Department of Entomology
National Chung Hsing Univ.
250 Kuo Kuang Road
Taichung, Taiwan

Kung, Prof. Dr. K. S.
Department of Entomology
National Chung Hsing Univ.
250 Kuo Kuang Road
Taichung, Taiwan
Lien, Dr. J. C.
Chief Medical Entom. Section
Taiwan Provincial Institute of Infectious Diseases
161 Kun-yang Street
Nankang, Taipei, Taiwan

GERMAN FEDERAL REPUBLIC

Jurzitza, Prof. Dr. Gerhard
Reinmuthstrasse 27
D-7500 Karlsruhe 21

HOLLAND

*Beukeboom, L. W. (1982-1983)
Van Royenlaan 23 B
9721 EK Groningen
*Hermans, Dhr. J. T.
Hertestraat 21
6067 ER Linne
*van Tol, Dr. J.
Postbus 637
2300 AP Leiden

INDIA

Sarkar, Mr. Nirmal Kumar
Department of Zoology
Rishi Bankim Chandra College
Naihati - 743165, W. Bengal
Ziauddin Ahmed, Dr. A. K.
Department of Zoology
Sibsagar College
Joysagar - 785665, Assam

JAPAN

Hamada, Mr. K.
16-21-4, Shinyashiki 2-chome
Kochi, 780
Kohama, T.
Miyako Branch
Okinawa Agricultural Experimental Station
2071-40 Nishizato
Hirara, Okinawa Pref., 906

PAPUA NEW GUINEA

*Thistleton, Dr. Brian M.
Kuk Agricultural Research Station
P.O. Box 339
Mount Hagen

REPUBLIC OF BOPHUTHATSWANA

Parr, Prof. Dr. Michael J.
Department of Biology
University of Bophuthatswana
Post Bag X2046
Mafikeng 8670
Southern Africa

SWEDEN

*Sahlen, Goran
Krongjutarvagen 3C
S-730 50
Skultuna

TANZANIA

Schluter, Dr. Thomas
Department of Geology
University of Dar es Salaam
P.O. Box 35052
Dar es Salaam

THAILAND

*Pinratana, Bro. Amnuay
St. Gabriel's College
565, Samsen
Bangkok - 10300

UNITED KINGDOM

El Amin El Rayah, Dr. M. (1982-1983)
Department of Zoology
Birkbeck College
University of London
Malet Street
London, WC1E 7HX
*Shanahan, Mr. M. J.
228 Main Road
Broomfield
Chelmsford, Essex CM1 5AW

UNITED STATES

Calabrese, Dr. D. M.
Department of Biology
Dickinson College
Carlisle, PA 17013

Garrison, Dr. Rosser W.
1030 Fondale Street
Azusa, CA 91702

*Lutz, Dr. Paul E.
Department of Biology
University of North Carolina at Greensboro
Greensboro, NC 27412

*Perlman, Mr. Dan
19 Hamilton Road #2
Brookline, MA 02146

Sherk, Dr. Truman E.
65 Seaview Avenue
Branford, CT 06405

Sherman, Dr. Karen J.
1492 Deer Path
Mountainside, NJ 07092

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INTERNATIONAL SYMPOSIA

Don't forget the Seventh International Symposium of Odonatology announced in SELYSIA, Volume 11, No. 1. It will be held in Calgary, Alberta, Canada, August 14-20, 1983. There will also be a Post-Symposium Excursion to the Rocky Mountains of Alberta and British Columbia for sight seeing and collecting August 20 and 21. Registration to attend must be made before May 31.

The Eighth International Symposium will definitely not be held in Taiwan in 1985. An announcement of the place will be made later.

APPEAL FROM HAL WHITE

For a number of years Hal White has been sending out his annual collecting data to a number of odonatologists with permission to use the records. Now he has written me the following: "This year Robert Lake of the University of Delaware Department of Entomology and Applied Ecology and I will be compiling records of Delaware Odonata for publication. Our list now numbers 107. If you have any records from Delaware that we may include, we would appreciate them. In addition we would appreciate learning of published and unpublished records for New Jersey, southeastern Pennsylvania, eastern Maryland, and eastern Virginia. These will give us a better view of other species that might be expected in Delaware." If you can furnish such data please send it to Dr. H. B. White, III, Chemistry Dept., University of Delaware, Newark, DE 19711.

— M. J. Westfall, Jr.

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NEWS ITEMS REQUESTED

The editors of SELYSIA would appreciate receiving items of interest to our readers. Notes concerning changes of address, comments on research, current project information, and other contributions will be most welcome.

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As a service to the members of S.I.O. and as an item of information to our other readers, we are appending to this issue of SELYSIA the Constitution and By-Laws of the Societas Internationalis Odonatologica.

CONSTITUTION OF THE INTERNATIONAL ODONATOLOGICAL SOCIETY,

SOCIETAS INTERNATIONALIS ODONATOLOGICA (S.I.O.)

Article I OBJECTIVES

The Societas Internationalis Odonatologica (S.I.O.) is a non-profit society interested in:

(1) Promoting Odonatology through:

(a) The encouragement of understanding, cooperation and friendship among Odonatologists throughout the world.

(b) The encouragement of international collaboration in odonatological research activities and services.

(c) The planning and organization of international symposia and regional meetings of odonatologists.

(d) The dissemination of information of interest to odonatologists and others by means of publications.

(e) The establishment and maintenance of an international research centre, which would house the collections and library of the Society.

(f) The encouragement of the development of Odonatology in countries where it is not strongly represented.

(g) The maintenance of liaison with other entomological societies or institutions.

(h) The representation of Odonatology in other international organizations.

(2) Conservation of dragonflies and their natural habitats.

Article II MEMBERSHIP

(1) Four types of membership are recognized:

(a) Ordinary Membership, open to all persons interested in Odonatology, on application to the Secretary-General.

(b) Honorary Membership, on election.

(c) Associate Membership, applicable to members of affiliated Associations who are not Ordinary or Honorary Members.

(d) Sustaining Membership.

(2) Ordinary, Honorary and Sustaining members have full voting privileges in the Society.

(3) Ordinary and Associate members pay fees.

Article III ADMINISTRATION

The administration of the financial and other affairs of the Society will be under the direction of a Council.

Article IV THE COUNCIL AND THE EXECUTIVE COMMITTEE

(1) There will be a Council consisting of elected and ex officio members as determined in the By-laws.

(2) There will be an Executive Committee consisting of those members of The Council who are deemed in the By-laws to be the Officers of the Society.

Article V BUSINESS MEETINGS

At every International Symposium a properly advertised Business Meeting will be convened by the Secretary-General.

Article VI PUBLICATIONS

(1) The Society will publish a journal ODONATOLOGICA and ODONATOLOGICAL ABSTRACTS.

(2) The journal will be supervised by the Executive Editor in consultation with the Associate Editors and the Editorial Board.

(3) Other publications may be produced from time to time with the approval of The Council.

Article VII FINANCE AND PROPERTY

(1) Sources of revenue of the Society are:

(a) Membership fees,
(b) Subscription fees to the journal ODONATOLOGICA,
(c) Special charges for pages, illustrations etc. for the journal,
(d) The sale of other publications,
(e) Miscellaneous other sources.

(2) All funds collected are the property of the Society, together with all material purchased with revenues mentioned above.

(3) The accounts of the Society will be audited by two members of the Society, approved by a regularly convened Business Meeting. The Auditors will hold office during the entire period between two consecutive Business Meetings of the Society.

Article VIII THE BY-LAWS

Other matters affecting the conduct of the Society are determined by the By-laws.

Article IX MODIFICATION OF THE CONSTITUTION

Proposed amendments to the Constitution must be submitted in writing to the Secretary-General six months before the meeting at which they are to be discussed and must be circulated to the Membership well in advance of such meeting. The amendment must be approved by a two-thirds majority of members present before going into force.

The Constitution was approved by a two-thirds majority of members present at a formally convened meeting of the Society, held on 21st September, 1973, during the Second International Symposium of Odonatology in Karlsruhe, German Federal Republic. Subsequent modifications were effected at the Plenary Business Meeting of the Society, held on 18th August, 1981, during the Sixth International Symposium of Odonatology in Chur, Switzerland.

BY-LAWS OF THE INTERNATIONAL ODONATOLOGICAL SOCIETY,

SOCIETAS INTERNATIONALIS ODONATOLOGICA (S.I.O.)

Article 1 OBJECTIVES

The S.I.O. aims at promoting Odonatology. It is a non-profit Society without political or philosophical convictions. The seat of the Society is at the Treasurer's address.

Article 2 THE COUNCIL

(a) There will be a Council, consisting of a President, a President-Elect, a Past-President, a Secretary-General, a Second Secretary, a Treasurer, the Executive Editor and four ordinary members. In addition the Council is empowered to co-opt members as appropriate, and to appoint specialized working groups, including standing committees.

(b) The President, President-Elect, Secretary-General, Second Secretary and the four ordinary members are elected by the membership. The Secretary-General, the Second Seceretary and the four ordinary members are elected for a period of two years and are eligible for immediate re-election. The President-Elect is elected for a period of two years and will then automatically become President for a further period of two years. The retiring President is not immediately eligible for re-election as President-Elect.

(c) Council may produce a list of nominations for the elected posts. These will normally be made available, together with a request for any further nominations, to the membership at least five months before the biennial Plenary Business Meeting. Nominations must be received by the Secretary-General within eight weeks of the mailing date. Each nomination must be supported in writing by two voting members and include the written consent of the nominee. A voting slip will be circulated promptly after the closing date for the receipt of nominations. To be valid all votes must be received by the Secretary-General within six weeks of the mailing date. The results of the election will be announced at the Plenary Business Meeting and the membership duly informed. The new Council will take office immediately following the Plenary Business Meeting.

(d) The Treasurer, the Executive Editor of Odonatologica and the National Representatives are appointed by the Council and are then ex-officio members of the Council.

(e) The President, President-Elect, Secretary-General, Treasurer and the Executive Editor of Odonatologica are the Officers of the Society. An Officer may hold more than one office, except that the President may not also be the current President-Elect, Secretary-General or Treasurer, and the Executive Editor may not also be the current Treasurer.

(f) The Council is responsible for the general administration of the Society, including the appointment of the Associate Editors and Editorial Board of Odonatologica and the S.I.O. Librarian, and the nomination of the Society's representative on the Odonata Specialist Group of the Species Survival Commission of the I.U.C.N. Any member of The Council may act as a representative of the Society at international meetings of other societies.

(g) Decisions of The Council are taken by simple majority vote.

(h) Correspondence of the Society, implicating the Society's responsibility in financial matters, may be signed only by the Officers and the National Representatives.

(i) The members of The Council are not rewarded financially for services rendered to the Society.

Article 3 THE EXECUTIVE COMMITTEE

(a) There will be an Executive Committee, consisting of the Officers of the Society (Article 2(e)).

(b) The Executive Committee is empowered by The Council to make decisions on its behalf and reports to The Council. The Executive Committee will normally consult The Council on matters which it considers to be controversial.

Article 4 MEMBERSHIP

(a) Ordinary membership is open to all persons interested in the field of odonatology upon written application to the Secretary-General, Treasurer or a National Representative.
Ordinary members receive the journal Odonatologica and have full voting privileges in the Society.

(b) Distinguished Odonatologists may be elected as Honorary Members of the Society. Candidates may be proposed by any members of the Society. A two thirds majority of the business meeting is required for election.
Honorary members receive the journal free of charge and have full voting privileges.

(c) Associate membership is defined in Article 7(b).

(d) Sustaining membership.

Article 5 FEES AND CANCELLATIONS

The fees (in Dutch Guilders at present) of Ordinary and Associate Members are recommended by the Treasurer and subject to approval by The Council. Fees should be paid one year in advance by December 1st of the current year. Cancellations, likewise, should be brought to the notice of the Treasurer or a National Representative before December 1st. Otherwise, the membership shall stand automatically and the fee for the next year become due to the Society.

Article 6 NATIONAL REPRESENTATIVES

(a) In countries where circumstances make it appropriate The Council may appoint a National Representative.

(b) The structure and operation of National Offices will be decided by The Council.

Article 7 AFFILIATED ASSOCIATIONS

(a) Odonatological Societies and other Odonatological Associations may become affiliated to S.I.O. The conditions for affiliation are:
  (i) that the Association should produce a circular, newsletter or other serial publication;
  (ii) that the Association's publication should include the S.I.O. emblem in its heading, and keep members of the Association informed of S.I.O. activities, e.g. symposia and publications;
  (iii) that, if an Affiliated Association forms a committee, the structure of the committee should be such as to include one member of S.I.O. as an ex officio member of that committee.

(b) Members of Affiliated Associations who are neither Ordinary nor Honorary members of S.I.O. shall be called Associate members of S.I.O.

(c) Associate members shall pay a suscription to S.I.O. (which will be in addition to any National suscription). This will be fixed as in Article 5.

(d) Associate members shall be eligible to
  (i) attend the International Symposia of the Society on payment of an appropriate conference fee.
  (ii) purchase the publications of S.I.O. at the same price as Ordinary and Honorary members.

(e) The organization of each Affiliated Association shall be entirely within the hands of the members of the Association.

(f) All Ordinary and Honorary members of S.I.O. will be encouraged to join any Affiliated Association formed in their country.

(g) The Editor of the National Publication may reproduce any Odonatological Abstracts and summaries of papers in Odonatologica, which are of national interest, in the Affiliated Association's publication.

(h) Any expenses incurred by an Affiliated Association shall be the responsibility of that Association, not of S.I.O.

(i) If an Affiliated Assocation decides that a National Subscription is necessary, ordinary members of S.I.O. who are also members of the Association will have the National Subscription added to their S.I.O. subscription. The appropriate amount will be refunded to the Association either directly by the National Representative or, if there is no National Representative, by the Treasurer of S.I.O. Honorary members of S.I.O. should be considered for the same status by their Association.

Article 8 THE HONORARY PRESIDENT

(a) The title Honorary President of S.I.O. may be awarded to a person who has made distinguished contributions to Odonatology.

(b) The title is personal and persists for life.

(c) There will be only one Honorary President at any one time.

(d) The nomination procedure will be decided by Council and made known to the membership at appropriate times.

Article 9 PUBLICATIONS OF THE SOCIETY

The S.I.O. publishes the journal Odonatologica at regular intervals. Other publications may also be released. In all cases, the volume of publications shall depend on financial possibilities. The prices of all publications are to be fixed by the Treasurer.

Article 10 SYMPOSIA

The venue of the next Symposium shall be arranged at the biennial Plenary Business meeting.

Article 11 FINANCES

All funds collected by the Society must be spent for the benefit of the Society and its activities. A detailed account of all revenues and expenses shall be prepared by the Treasurer on a biennial basis. This account shall be audited by two members, elected at the biennial Plenary Business Meeting. The Auditors should reside in the same country as the Treasurer. The Auditors should reside within a reasonable distance of the Treasurer.

Article 12 MODIFICATION OF THE BY-LAWS

Any change in the By-laws requires a two-thirds majority at a quorate Plenary Business Meeting of S.I.O. or in a referendum of all voting members (i.e. Ordinary, Honorary and Sustaining Members). A quorum shall be defined as 10% of the membership eligible to vote, namely Ordinary, Honorary and Sustaining Members.