

THE NEWSLETTER OF THE SOCIETAS INTERNATIONALIS ODONATOLOGICA AND THE U.S. NATIONAL OFFICE

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Johnson City, Tennessee

September 1, 1987

IX INTERNATIONAL SYMPOSIUM OF ODONATOLOGY

REGISTRATION DEADLINE EXTENDED Dr. S. Mathavan Biological Sciences, Madurai Kamaraj University Madurai - 625 021, INDIA

The last date for the submission of abstract, registration form and registration fee has been extended up to the end of September, '87. I would encourage members to register before the end of September, '87. Looking forward with pleasure of meeting you at Madurai in January, '88.

REGISTRATION FEES FOR SOUTHEAST ASIANS

B.K. Tyagi Vector Control Research Centre Medical Complex, Indira Nagar Pondicherry - 605006, INDIA

The Organizing Committee of the IX International Odonatological Symposium (Madurai, January 18-21, 1988), headed by the Organizing Secretary Dr. S. Mathavan, the S.I.O. National Office in India and the S.I.O. Central Office have of late felt that the registration fee for the odonatologists in all the southeast Asian countries must be the same as indicated separately for those in India. It is heartening, therefore, that Dr. S. Mathavan has agreed to allow workers and their participating family members to pay as registration fee the same amount as applicable to the Indian colleagues, i.e. Rs (Ind.) 350/for full S.I.O. members; Rs. 200/- each for the Student Members and Associate Members (family and relatives of the Full S.I.O. members). The willing odonatologists may send their remittances as equivalent to the Indian fees, and this they can send by any convenient way. Inconvenience already caused to any colleague who has sent the registration before this announcement is very greatly regretted. Nevertheless, it is assured that in case such colleagues attend the symposium, then the additional amount will be refunded to them on the spot. I hope we will attend the symposium with great ease and comfort.

POETIC FOLKLORE FOR JILL LUCAS

Don Johnson

Department of English, East Tennessee State University Johnson City, TN 37614 USA

In reponse to the request for dragonfly folklore published in SEYLSIA 16(1), I offer the following poem which is based on memories of my childhood in West Virginia. It is included in my book, The Importance of Visible Scars (ISBN: 0-931694-26-4) published by Wampeter Press, Box 512, Green Harbor, MA 02041 USA (Copyright 1984 by Don Johnson).

Snake Doctors

In the hills they call dragonflies "snake doctors." I knew snake doctors kiss bitten moccasins, curing the sickness of snake fights. Peewee Worley, who was eight, had seen it, down behind Carruthers' barn: two snakes, fanged together poison-locked, until, as if by signal, they untied and lay there side by side unmoving, like two friends grown tired of wrestling.

But when the dragonfly appeared, hovered green above their heads, then touched each one in turn just once and left, the life rolled slowly back along the slackened skins, building coils, allowing each to slip away-toward the chicken house, toward the trough, where Peewee found them both and hoed their heads off.

SELYSIA

A Newsletter of Odonatology

Edited by
Dan M. Johnson
Department of Biological Sciences
East Tennessee State University
Johnson City, Tennessee 37614 USA

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.

SELYSIA was founded in 1963 by Dr. B. Elwood Montgomery at Purdue University, and edited from 1970-1986 by Dr. Minter J. Westfall, Jr., at the University of Florida. With V. 13, #1 (1 March 1984) it was recognized as the official newsletter of the Societas Internationalis Odonatologica as well as the U.S. National Office of S.I.O.

SELYSIA is issued semi-annually, 1 March and 1 September. Items submitted should reach the editor no later than one month before publication date.

This newsletter is produced as a public service of the Department of Biological Sciences, East Tennessee State University.

JEAN BELLE HONORED

Congratulations to Dr. Jean Belle on being selected "Honorary Curator' by the Museo de Invertebrados of the Universidad de Panama on the occasion of the museum's tenth anniversary in May 1987. Dr. Belle is one of ten distinguished zoologists being recognized by the museum for "their unfailing support and collaboration during its first decade of existence", according to a letter from Dr. Quintero Arias, Director, dated 14 October 1986.

NEW YORK ODONATA DATA SOUGHT

Thomas W. Donnelly 2091 Partridge Lane Binghamton, NY 13903 USA

New York is one of the poorest known of the states in the east for Odonata. Besides the old papers by Calvert and Davis, the old list by Needham, and the short paper by Hood, there is little published.

I am preparing a state list and solicit data for this purpose. I especially need information for Long Island and downstate New York, and also for the far western part of the state. I would appreciate any data that people can supply for this purpose.

"DRAGONFLY ART"

Dan M. Johnson Biological Sciences, E.T.S.U. Johnson City, TN 37614 USA

I am working with the B. Carroll Reece Museum here at East Tennessee State University to plan an exhibit of "Dragonfly Art" to coincide with the 10th International Symposium of Odonatology, sponsored by Societas Internationalis Odonatologica, during 6-12 August 1989. Tentative plans call for a 6-week exhibit, opening in early August. If you know of items that ought to be included in such an exhibit, I would appreciate your sending me a description of the item and sufficient information that I could contact the appropriate individual or museum.

DR. NORMAN W. MOORE VISITS JAPAN

Dr. Syoziro Asahina Takadanobaba 4-4-24 Shihjuku-ku Tokyo, 160 JAPAN

During two weeks in the middle of May 1987, Dr. Norman W. Moore visited Japan as the Chairman of the I.U.C.N./S.S.C. Odonata Specialist Group. His purpose was to observe the developing Dragonfly Sanctuary at Ikedadani, Nakamura City, Kochi Prefecture, Shikoku, and to give advice concerning its management. The impetus behind the Sanctuary is W.W.F. Japan (W.W.F.J.) and the Tombo-nokai, a local dragonfly conservation group founded in 1985. The Chairman of the Tombo-no-Kai is Mr. S. Kayo and the Standing Manager is Mr. M. Sugimura (cf. Asahina, 1983).

During Dr. Moore's stay W.W.F.J. sponsored his traveling, and, together with other officers of W.W.F.J., I guided his travels in Kochi, Osaka, Kyoto and Shizuoka Prefectures.

Together with W.W.F.J. members I met Dr. Moore on May 14 at the W.W.F.J. office in Tokyo. The next day our group reached Nakamura, and in the afternoon, after a courtesy visit to the Mayor of Nakamura, we went to the Ikeda-dani Dragonfly Sanctuary, following a brief visit to the Dogamori Valley for *Epiophlebia* observation.

We stayed at Nakamura for five days, and investigated the area carefully and discussed the future management plan with members of the Sanctuary. In this season the flight of *Epiophlebia superstes* was still observed in Morisawa Valley. On May 18, a symposium to talk about the Dragonfly Sanctuary was held in the City Hall, where an audience of about 300 gathered.

On May 19 we moved to Osaka and visited Osaka Municipal Museum of Natural History to meet Dr. Tsuda and to talk about the World Odonata Catalogue he compiled. Afterwards, we visited Mr. Kiyoshi Inoue's home where the national office of S.I.O. is located.

On May 20, under the guidance of Mr. Inoue and other Kansai-Group members we entered Kibune Valley, North of Kyoto, where many adult *Epiophlebia superstes* were seen flying and egg laying. Then, we visited the Mizoro-ike Marsh in Kyoto City to observe *Nannophya pygmaea* habitat.

On May 21, we moved to Hamamatsu in Shizuoka Prefecture by the bullet train and visited the Okegaya-numa Pond, a good marsh where *Libellula angelina* was still observed. This is the only habitat for that species in Japan. Mr. Fukui and the group protecting Okegaya-numa Pond guided us during the visit.

Before leaving Japan on May 27, Dr. Moore attended a number of press- meetings and visited the Environmental Agency of the Government. He handed an instructive report to W.W.F.J. which proposed a future management plan for the Ikeda-dani Sanctuary.

Reference

Asahina, S., 1983. 1978-1983 Progress report on dragonfly conservation in Japan and China. S.I.O. Rep. Odon. Specialist Group. Int. Un. Conserv. Nat., No. 5, 1-4.

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

Dr. Wolfgang Schneider Institut fur Zoologie, Universitat Mainz Saarstrasse 21, D-6500 Mainz-1, F.R.Germany

Systematik and Zoogeographie der Odonata der Levante, under besonderer Berucksichtigung der Zygopteren [Systematics and biogeography of the Levantine Odonata, with special reference to Zygoptera] (in German)

W. Schneider. Universitat Mainz D. Phil. Thesis. December 1986.

ABSTRACT

The odonate fauna of the Levant (92 species and subspecies, 16 of which endemic) is revised and its origin and biogeography are discussed.

All the taxa are described, figured, keyed, and discussed in detail. The complete synonymy is worked out, and the inventory is presented of all known regional material, incl. that harboured in the collections of 14 Natural History Museums.

The distribution patterns and the high degree of endemism suggest a Syrian primary centre of origin, with Levantine and Mesopotamiam secondary centra. The colonisation of the Levant occurred in several waves, during the Pleistocene pluvials and in the humid Holocene periods. An early immigration of the Afrotropical elements took place in Pleistocene, along the wadi systems running parallel to the Red Sea coastline, while the Nile-Sinai road was followed during the Holocene immigration. On the basis of its odonate fauna, Southwestern Arabia is assumed to represent an independant (relict) centre of distribution. [B.Kiauta]

Dr. Clay L. Pierce Department of Biology, McGill University Montreal, Quebec, Canada

Effects of Fish on Littoral Invertebrates.
C.L. Pierce.
Department of Zoology, University of Maryland USA
Ph.D. 1987.

ABSTRACT

Field and laboratory experiments assessed the effects of predatory fish on benthic invertebrates in the littoral zone of a small pond. Effects on demographic parameters and behaviors were considered. To test for a response to release from fish predation, I removed bluegills (Lepomis macrochirus) and largemouth bass (Micropterus salmoides) from replicated exclosure pens. Densities and biomass of most taxa were unaffected, but tabanid densities were significantly higher in fish exclosures. Total invertebrate densities did not differ between treatments. but total biomass was significantly higher in fish exclosures than controls. Bluegill spawning activity creates benthic disturbances, and to test whether this affects invertebrate abundance, I monitored densities and biomass in spawning areas and nearby undisturbed areas before and after the onset of nest construction. Densities and biomass of most macroinvertebrates were similar before and just after nest construction. Insects were generally more abundant in undisturbed areas six weeks after nest construction. Microinvertebrates were more abundant in undisturbed areas before spawning. Copepods and ostracods were more abundant in spawning areas after nest construction. To test whether macroinvertebrates would respond to fish predators behaviorally, I manipulated the presence and activities of adult bluegills in patches of defaunated littoral substrate, and subsequently monitored macroinvertebrate colonization. Dragonfly larvae strongly avoided colonizing patches where fish were present. Other taxa were unaffected by bluegills, although densities of beetle larvae were reduced in patches by predation.

To further investigate the behavioral responses of dragonfly larvae to fish suggested by the field experiment, I conducted laboratory experiments examining effects of fish and diel period on microhabitat use and foraging. The two dominant species from the field study, *Tetragoneuria cynosura* and *Ladona deplanata*, were generally found underneath cover, especially during the day or when fish were present. Fish strongly depressed foraging in last instar *Tetragoneuria* and *Ladona*. *Sympetrum semicinctum*, a confamilial species from a nearby fishless pond, was generally found in exposed locations, but shifted toward cover during day trials when fish were present. Foraging in *Sympetrum* was unaffected by either fish or diel period. Vulnerability of dragonfly larvae to bluegill predation was positively correlated with use of exposed microhabitats.

OCTOGENARIAN SEARCHING FOR MYSTERIOUS GOMPHUS

Dr. Paul D. Harwood 1423 Township Road 805, R 2 Ashland, Ohio 44805 USA

I recall with pleasure my first encounter with a Hetaerina, merely H. americana, which I took in Stuart, Iowa shortly after I began to collect and study dragonflies. That was in 1936, more than a half-century ago. I was unable to collect a single dragonfly during World War II, and made but few trips afield until 1959 when I began to collect in West Virginia. I now have more than 4,000 specimens from the State, but they are mostly determined by hand lens in the field. I attempted last fall to determine all specimens which I had collected in Gilmer and Calhoun counties. Two specimens that were collected in the recreation park of Evansville and labelled Gomphus (G.) exilis are not of that species because of the shape of the anal appendages and of the hamules. They key out to G. militaris, but again the shape of the hamules rule out that western species. Of course the greatest fault of Needham and Westfall is that it is out of date.

I have beaten up my two mysterious specimens from Gilmer County, so no one could possibly determine them at this time. Indeed, one of them was subteneral and a poor specimen. This year, I hope to return to Gilmer County and collect nearly "mature" larvae for rearing, and in early July collect adults of both sexes. It remains to be seen if this octogenarian can accomplish that limited effort of collecting. Also I am getting all my specimens of *G. exilis* assembled in one spot to determine if any more of the *G. mystery* will turn up. At any rate it will take at least two years for me to solve the problem, and I may be dead or blind in less than two years.

OBITUARY: T. Edward Perry

Carolyn K. Perry Chagrin River Rd. Gates Mills, Ohio 44040 USA

It is my sad duty to tell you that ... my husband died a year ago on April 10. His dragonfly and damselfly collection has been donated to The Cleveland Museum of Natural History. Most of his field information and specimen inventory is already on their computer. Very soon the data should be available for study purposes.

RETURN TO THE SOUTH PACIFIC -COLLECTING IN FIJI, VANUATU, AND THE SOLOMON ISLANDS, 1987

Thomas W. Donnelly Geological Sciences & Environmental Studies SUNY, Binghamton, NY 13901 USA

In late January my wife Ailsa and I returned to the South Pacific for eight productive and exciting weeks. We collected on four Fijian islands (Viti Levu, Vanua Levu, Taveuni, and Kadavu), two Solomon Islands (Guadalcanal, Malaita), and Espiritu Santo in Vanuatu. We had several goals: to further study the Fijian species of the *Nesobasis* complex; to study platycnemidids in the Solomon Islands (following up on my notion that the *Nesobasis* complex through *Melanesobasis* is derived from one of these); and to look for *Nesobasis* in Vanuatu. We succeeded in all of these and found many additional species of interest.

After three previous trips to Fiji, I thought there was little possibility of finding any additional new species in the Nesobasis complex. Wrong! Collecting at previous places I found four new species, three Nesobasis, and one Melanesobasis. One of the Nesobasis is the largest in the genus.

The behavior of Nesobasis poses a special problem. Females of several species are prominent and territorial, and the males are found only with great difficulty lurking in heavy undergrowth. I now have three undescribed species whose males are unknown. I once thought that this behavior might be characteristic of endemic complexes in which at each locality many species co-occurred. In Fiji a "poor" stream may have only four species occurring together; better streams have eight species co-occurring, and some have more than a dozen! However, on this trip I observed females of one species fighting with males of another, and I no longer have a strongly favored hypothesis to explain the gender-reversal behavior that is so striking in this complex. Females of these species are commonly observed ovipositing all by themselves, and males commonly cannot be found, even lurking nearby in the undergrowth. I believe a careful study of this behavior would be very rewarding.

The Nesobasis complex is turning out to be one of the most interesting and speciose oceanic-endemic groups in the world. In Fiji I recognize 34 species (not including those females with unknown males) in three genera. In Vanuatu I now know of 7 species in both Melanesobasis and what Kimmins called Nesobasis, but which I am going to assign to another genus. My guess that this group was derived from a platycnemidid ancestor seems to have been presciently noted by Kimmins, who identified some Melanesobasis females as platycnemidids. In contrast with Megalagrion of Hawaii, there is no indication that any members are terrestrial, and only one species (Melanesobasis simmondsi) has been taken around still water.

In addition to success with *Nesobasis*, I also found the larva of *Hypothemis*, which Ris considered to be very primitive. I do not think it is; the larva does not resemble that of *Nannophlebia*, but is far more libelluline in aspect.

Perhaps the most interesting Fijian discovery was made not by me but by a friend, Dr. Paddy Ryan, of the University of the South Pacific. He took *Xanthagrion erythroneurum* in the high-elevation crater lake on Taveiuni. This is the first extra-Australian record for this species. I also took *Tramea eurybia* on this island, and we recall that there is an old record for *Synthemis macrostigma* from "Iles Viti". Thus, we now have

a substantial "Australian connection" to further confound biogeographers.

In the Solomon Islands we collected on Malaita and Guadalcanal. We took one of Lieftinck's still-in-press new species of Lieftinckia plus two new genera: one a platycnemidid and the other a remarkable new genus that seems to belong to the Isostictidae. This latter is especially interesting because I have a second species from New Britain which was recently recovered from material loaned to Lieftinck many years ago. If you imagine a damselfly which seems to combine the attributes of the isostictids and the platycnemidids, but slightly more of the former, then you can visualize this remarkable bug. Another interesting damsel is Pseudagrion "microcephalum". I have taken this complex from India to Samoa, and I believe its taxonomy would make a very rewarding study for someone. The Solomon Islands species seems to belong with Vanautu and Fiji Pacificum. The Samoa species seems distinct. However, the relation among Australian, New Guinea, Java, and Indian specimens in my collection is unresolved.

Among the Anisoptera, we found *Tapeinothemis* and *Guadalca* and took two genera for the Solomons: *Nannophya pygmaea* and *Camacinia othello*. The latter was especially interesting. It is gigantic (smaller wings but larger body than large African *Zygonyx*) and evidently suffers thermally during the middle of the day. One flew straight up about fifteen meters, and then fluttered slowly back to earth. It settled on the highest available perch, which was unfortunately my outstretched net rim! There were two aeshnids of interest in Guadalcanal. One is an *Anax* which is most like *gibbosulus*, but with thinner appendages; the second was a large, undescribed *Agyrtacantha*.

In Vanuatu we collected in Santo, which is somewhat too tame for my tastes. The real bush is inaccessible, and the reachable streams are in country which is heavily modified by agriculture. We took *Nesobasis malekulana* (which is a female-dominant species), and a second, undescribed species. I have still another new one from the same district, but these insects are very difficult to locate on this island. We also found *Zyxomma petiolatum*, which is a considerable range extension.

A final note on native words for odonates is in order. Several natives, with very limited English, offered "helicopter". The Solomon Islands is an area with many diverse languages: fourteen alone on Malaita and six on Guadalcanal. Two Guadalcanal natives offered the words katkatikolo and totokolo, derived from words meaning "tapping tail" and "water". On Malaita I heard the similar tataraikuni (Kwar'ae), from "inhabit" and "muddy water hole". I also heard tatarsibotho (Tobaita), whose strict derivation would be "scrape a pig's carcass!" In Fiji few natives offer a word (but they have widely known words for "butterfly" and "beetle"). A term known by some is caicaiwai from "copulate" and "water". A collector who has learned rudimentary Fijian would be advised, however, not to make up a sentence conveying an interest in catching dragonflies!

NORTH AMERICAN BENTHOLOGICAL SOCIETY MEETING

The recent meeting of the North American Benthological Society at the University of Maine, Orono provided an opportunity for plenty of discussions about dragonflies. Seventeen papers were presented in two "odonate ecology" sessions on 4 June 1987. These sessions attracted a large audience, and many attended a private luncheon for odonatologists during the intervening break. This meeting was auspicious for two other reasons: Art Benke (University of Alabama) was installed as President of N.A.B.S. for 1987-88; and Susan Cohn (University of Kentucky) was chosen to receive the Wildco Award for "best student paper". The following papers were presented:

ODONATA ECOLOGY SYMPOSIUM, Dan Johnson, Chairperson

The behavioral ecology of feeding adult Odonata. Michael L. May and Joel M. Baird, Rutgers University, New Brunswick, NJ 08903, USA.

Population ecology of damselfly *Lestes disjunctus* (Zygoptera:Odonata) in the St. Marys River, Michigan. Walter G. Duffy, National Wetlands Research Center, Slidell, LA 70458, USA.

Dispersal of larval Zygoptera: a field test for spacing behavior. Robert L. Baker, University of Toronto, Mississauga, Ontario, L5L 1C6 Canada.

Dragonfly behavioral responses to fish predators. Clay L. Pierce, University of Maryland, College Park, MD 20742, USA.

Dragonfly cohort-splitting: hypotheses tested and suggested. Dan M. Johnson, East Tennessee State University, Johnson City, TN 37614, USA.

Invertebrate predation and density-dependent interactions affect the species composition and abundance of larval damselfly assemblages (Odonata:Coenagrionidae) in fishless lakes. Mark A. McPeek, Kellogg Biological Station, Hickory Corners, MI 49060, USA.

Predation between anisopteran and zygopteran odonate larvae and its effect on the remainder of the prey community in experimental ponds. Scott A. Wissinger, Allegheny College, Meadville, PA 16335, USA.

Anisopteran odonate communites in a series of south-central Ontario lakes exhibiting a pH gradient. J. Bruce Pollard, Trent University, Peterborough, Ontario K9J 7B8, Canada.

CONTRIBUTED PAPERS, ODONATE ECOLOGY George Harp, Chairperson

Protracted oviposition by *Hetaerina titia* (Drury) (Zygoptera: Calopterygidae). George L. Harp, Arkansas State University, State University, AR 72467, USA.

The influence of temperature upon embryonic diapause in *Sympetrum vicinum* (Hagan) (Odonata:Libellulidae). Charles N. Boehms, Austin Peay State University, Clarksville, TN 37040, USA.

The efficacy of tube-building as an anti-predator behavior. Robert E. Bohanan, University of Wisconsin, Madison, WI 53706, USA.

The effects of larval density, prey presence and light on larval behavior in the damselfly, *Ischnura verticalis*. Susan L. Cohn, University of Kentucky, Lexington, KY 40506, USA.

Fish predation on the Odonata of Bays Mountain Lake. Thomas H. Martin, North Carolina State University, Raleigh, NC 27695, USA.

Selected biological aspects of *Gomphus ozarkensis* Westfall (Odonata:Gomphidae). Greg R. Susanke and George L. Harp, Arkansas State University, State University, AR 72467, USA.

Studies of *Ophiogomphus columbrinus* in the Ford River in Michigan. David M. Cornelius and Thomas M. Burton, Michigan State University, East Lansing, MI 48824, USA.

Singing in the acid rain: *Leucorrhinia* dominates benthos of acidified, fishless lakes. Richard Evans, Cornell University, Ithaca, NY 14853, USA.

Emergence of Odonata from Findley Lake and the subalpine ponds in the coniferous forest of the Cascade Mountains. Truman Sherk, P. O. Box 331, Branford, CT 06405, USA.

NEW BOOKS ABOUT DRAGONFLIES

Baastian Kiauta S.I.O. Central Office, P.O. Box 256, 3720 A.G. Bilthoven THE NETHERLANDS

The following books will soon be available from the S.I.O. Antiquarian Department:

THE DRAGONFLIES OF NEW ZEALAND. Richard J. Rowe. Auckland University Press, University of Auckland, Auckland, New Zealand. 260 pages, with a sixteen page colour section. (ISBN 1869400038). \$US 25.00

This is the first complete book on New Zealand's dragonfly fauna. It contains detailed information on the ecology and behaviour of all seventeen species, and is probably the most detailed biological study of any dragonfly fauna in the world. The book deals with biogeography, species identification, larval habits and biology, adult predatory and mating behaviour, and distribution.

It is profusely illustrated with line drawings, diagrams and scanning electron micrographs. The sixteen pages of colour plates are of living animals, almost all taken in the field. Distribution maps, a glossary, and a key to identification all help to elucidate the text.

NEW DRAGONFLY "FIELD GUIDE" IN PREPARATION IN GERMANY

Heiko Bellmann of Ulm, Federal Republic of Germany, has published recently 2 "field guides" on arachnids and grasshoppers of Central Europe. The books are characterised by exceptionally nice colour photographs and by concise, but very informative text. We have just been notified that he is working now on a dragonfly volume in the same series, published by the Neumann-Neudamm Publishers in Melsungen, FRG. For this purpose, he is rearing many species, and the book will contain information and photographic material on adult and larval stages. This is a novelty in the recent dragonfly literature. The publication date is still unknown, and the book will be available from the S.I.O. Antiquarian Department as soon as published.

PROPOSED CHANGES TO THE BY-LAWS OF S.I.O.

Dr. Gordon Pritchard
Department of Biology, University of Calgary
Calgary, Alberta, T2N 1N4 CANADA

Peter Mill, the Chairman of the Legislation Committee, has produced the attached changes to the By-Laws, which are occasioned by the I.O.R.I. According to the Paris minutes, these changes are to be distributed via SELYSIA to the Members for their approval.

- 2(a) Add "the Director and the General Manager of the I.O.R.I." to the list of Council members.
- 2(d) Add "the Director and, after consultation with the Director, the General Manager of the I.O.R.I." to the list of Council appointments to αx-officion membership of The Council.
- 2(e) Add "the Second Secretary and the Director of the I.O.R.I." to the list of Officers of the Society.
- 2(g) Add "and, in consultation with the Director, the Policy Board of the I.O.R.I." to the list of Council appointments.
- 2(k) "Bonafide expenses of Officers of S.I.O. will be reimbursed at the discretion of the Treasurer".
- (5) Add "The Treasurer may add a supplement to the S.I.O. annual membership fee for a specified period and for an amount not exceeding 20% of the S.I.O. annual fee, to enable a firm financial base to be established for the I.O.R.I.".
 Add a new article "International Odonata Research Institute (I.O.R.I.)"
- (a) The I.O.R.I. is an integral institution of the S.I.O. and as such is subject to S.I.O. regulations. Although financially autonomous, it may receive financial support from the S.I.O.
- (b) The I.O.R.I. is, for the time being, located within the building of the Florida State Collection of Arthropods (F.S.C.A.) in Gainesville, Florida, U.S.A.
- (c) The I.O.R.I. will harbour the S.I.O.'s Odonata collection, library and archives, and will ultimately also encompass the primary concentration of the S.I.O.'s research, administration and publishing activities.
 - (i) The Collection will provide for the continuing maintenance of all specimens and serves as a repository for voucher specimens submitted to the Editors of Odonatologica by the authors of papers published therein.
 - (ii) It is intended that the Library shall be a complete collection of the world Odonatological literature, and continually updated through acquisitions of current titles. Material used for preparation of 'Odonatological Abstracts' constitutes part of the acquisitions.
 - (iii) The Archives will provide for the continuing storage of, and easy access to, unpublished material concerning odonatology and odonatologists. Photographic and tape-recorded materials will also be systematically collected.
 - (iv) The computerized Data Retrieval System will be developed with the aim of covering the world odonate literature and fauna.
 - (v) It is intended that the laboratory and research facilities shall be adequate for the requirements of the scientific staff and guest research workers.
 - (vi) The basic publication of the I.O.R.I. is its 'Annual Report'. Other incidental and serial publications will be produced when required. The coordination of the publication programme with that of the general S.I.O. publication programme will be subject to agreement between the S.I.O. Executive Editor and the I.O.R.I. Director.
 - (vii) Coordination of research and planning in odonatology, on an international scale, is among the principal objectives of the I.O.R.I.
 - (viii) It is hoped to concentrate the S.I.O. administration and some S.I.O. Editorial Offices, as well as various other activities of S.I.O., in the I.O.R.I. Each case will be considered separately by the S.I.O. Executive Editor and the I.O.R.I. Director.
 - (ix) The Identification and Xeroxing services will operate in accordance with internal regulations.
- (d) General supervision of the I.O.R.I. lies with the S.I.O. Council, which appoints the Director, General Manager and Policy Board in accordance with By-Law 2(d,g), all of whom are responsible to the S.I.O. Council. They, together with any members of the scientific staff, shall be members of S.I.O. The Director and General Manager may hire other personnel at their discretion.
 - (i) The Director serves as Chairman of the Policy Board. Among his/her tasks are all executive duties, the coordination of activities, fund raising and formal representation in relation to scientific, administrative and other instutitions.
 - (ii) The General Manager shall be a qualified odonatologist, preferably with a doctorate, and shall serve as Secretary to the Policy Board (with full voting privileges). He/she will be responsible to the Director for the day-to-day business and administration of the I.O.R.I.
 - (iii) The Policy Board shall consist of distinguished representatives of various odonatological disciplines; its membership shall have an international character. Its task is general policy formulation.
- (e) The ultimate goals of the I.O.R.I. are:-
 - (i) To obtain for its collection specimens of all known species of Odonata.
 - (ii) To obtain for its library all published information on the Odonata.
 - (iii) To be housed in its own building which will include research laboratories, a collection room, library, offices and storage rooms.
 - (iv) To provide living quarters for several visiting odonatologists.
 - (v) To host regular meetings, workshops and seminars on odonatology.
 - (vi) To participate in M.Sc. and Ph.D. research programmes of local universities.
- (f) Benefits of the association with the F.S.C.A. include free and complete access to F.S.C.A. collections and the opportunity to liaise with F.S.C.A. staff and research workers.
- (g) Further details of the arrangement between S.I.O. and the F.S.C.A., including details of the disposal of the Institute's assets in the event of its dissolution, are contained within the documents "Memorandum of Understanding Between the International Odonatological Society and the Florida State Collection of Arthropods on the Mutual Benefits of Cooperation in the International Odonata Research Institute, 1985" and "Addendum to the Memorandum of Understanding, 1986".
- (h) Statutes and By-Laws of the I.O.R.I. shall be prepared by the Director at his/her discretion; they shall be compatible with the Constitution and By-Laws of S.I.O. and shall be subject to the approval of the S.I.O. Executive.

Any full member of S.I.O. disapproving of any of these changes should inform the Council Secretary (Gordon Pritchard, Department of Biological Sciences, The University of Calgary, 2500 University Drive N.W., Calgary, Alberta, Canada T2N 1N4) before 31 October 1987.

No response will be taken as indicative of approval.