November 1, 1971

THE AUSTRALIAN NATIONAL INSECT COLLECTION, CANBERRA, AUSTRALIA

## **ODONATA**

by
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Curator of Odonata

The Australian National Insect Collection of Odonata, housed with the rest of the ANIC at the CSIRO Division of Entomology in Canberra, is based on the collection compiled by the late Dr. R. J. Tillyard, with later major collections from Mr. Roderick Dobson and myself. The collection comprises two parts. first, the pinned collection, is housed in 33 steel cabinets each of 10 drawers, each with a floor space 18" square. Zygoptera are pinned in unit trays, erally 4 per drawer, while the Anisoptera are sorted on the basis of individual The second, the "spirit" coldrawers. lection, includes larvae in 80% ethanol and some adults in ethyl acetate, and is housed in 3" by 3/4" vials in racks, stored in 24 steel 3" by 5" card filing drawers.

The pinned collection includes perhaps 10,000 specimens representing all but 6 of the 246 described species or subspecies which I recognize from Australia, and material of a further 20 undescribed species or subspecies. There are also series of exotic Odonata, the Nearctic and New Guinean faunas being best The undescribed material represented. comprises coenagrionids, protoneurids, megapodagrionids, and a second species of the chlorolestid genus Episynlestes Tillyard; and gomphids, a corduliid, and five The holdings of primary libellulids.

types are limited, most of Tillyard's types having been lodged with the British Museum (Natural History) after his death, and comprise 5 Tillyard types (Neosticta canescens dorrigoensis, Argiolestes minimus pusillus, Diphlebia euphoeoides, unicornis pulchra, and Austroaeschna Synthemis martini), 6 Fraser types from the Dobson Collection (Argiolestes calcaris, Argiolestes calcaris tenuis, Argiolestes griseus subgriseus, Gynacantha dobsoni, Archaeophya adamsi, and Micromidia rodericki), and 2 Watson types and Trapezostigma (Lestoidea barbarae stenoloba). There are also three specimens on permanent loan from the Macleay Museum, University of Sydney, which are possibly Drury types; 2 specimens of "Libellula" coeruleata, one "Muskito Shore" and the other, unlabelled closely resembling the original figure; and a specimen of "Libellula" lydia, with the label "This is described and figured correctly by Drury Vol. 1 pl. 47, fig 4...". Both labels are in an antique hand, on similar heavy laid paper.

The larval collection includes reliably identified material of about a third of the Australian fauna. Tillyard's larvae and exuviae are all pinned, some with the adults reared from them; my reared material is also pinned; and the remainder is mixed, most of the specimens being in alcohol.

Two revisionary studies are in progress, one dealing with the Australian Gomphidae, and the other with the Isostictinae. The gomphid revision is based on larvae and adults, the characters of which produce parallel classifications, unlike the case in some other gomphid faunas.

### SELYSIA

A Newsletter of Odonatology

Compiled at Department of Zoology University of Florida Gainesville, Florida

by

Minter J. Westfall, Jr. and Clifford Johnson

Issued at intervals as available news and information warrant

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.

CONTRIBUTIONS BY LEONORA K. GLOYD Museums Building, Univ. Michigan Ann Arbor, Michigan 48104

> Let's be Precise in Our Description of Species

Our language is changing and many words that once had very definite meanings are now used very loosely. However, it is important to keep the scientific language exact. The following words are some I am especially aware of in descriptions of species.

Colors. - Shade, tint, and tone:
Shade is commonly used to indicate any
degree of a color but originally a
"shade" meant something darker than the

true color, and a "tint" was lighter. Shades and tints are tones of a color. In scientific descriptions I think we should limit the use of shade to mean darker than the true color. For example, two tones of light blue are not shades of blue, but one can be a shade (meaning slightly) darker or intense and described as a darker tone or a lighter tint, as the case may be.

Fade, blend, and merge: A pale color does not fade to a darker one, but one can blend or merge with the other. Only the darker color fades to a lighter one. For example, red can fade to pink, and pink can fade to a still lighter tint or tone, but pink can never fade to red.

Another suggestion in regard to color is to be more specific when using the suffix -ish. The question arises, "-ish what?" For example, "The thorax is reddish", and yet, no mention has been made of the basic color. Is it reddish black, brown, purple, gray, or even green with red, or reddish, reflections or overtones? The hyphen can also be employed in describing hues, as blue-gray, yellowbrown, blue-green, etc., giving the name of the predominant color last. Intermediate hues can be expressed by using combinations such as yellowish red-yellow, reddish red-yellow, yellowish green, etc. A predominating color may also be qualified as tinged with pink or To be as exact in dewith a pink tint. scribing colors as Ridgway was for birds is not necessary as colors in the Odonata may change considerably from teneral to old-age adults and as dried specimens.

Color Patterns. - Stripe, bar, or band: In the description of a dragonfly I think of a stripe as being longitudinal; a bar as a short stripe, but should have a modifier explaining whether transverse, diagonal, or longitudinal; and a band as something that encircles, or almost does, and that should never be used to mean a longitudinal stripe.

Mesial, median, and medial: Mesial more easily understood but is it technimeans of, in, toward, or along the mid- cally correct? Any suggestions? dle; whereas, median definitely refers to the line or plane that divides a part lengthwise into symmetrical halves. median stripe, then is right on the midas two median stripes on the same specibe quite correct as medial means nearer the median plane or axis of a body as opposed to lateral.

Shapes: To describe shapes of various dark or light areas, the botanical terms for leaves are quite useful and meaningful. To increase our word power, we would do well to study the concise, beautifully expressed descriptions of Rambur and, of more recent date, those of Lieftinck which read so smoothly.

Size. - Because of the great variation in size of individuals in many species, a ratio is often of greater value than actual measurements in mm., but be sure to write what you mean. To say (1), "The thorax is one and a half times wider than the head" is quite different from (2), "The thorax is one and half times as wide." Think it over. If width of head is a mm., then (1) thorax= $1a + 1 \frac{1}{2a}$  or 2 1/2a mm.; for (2), thorax=1 1/2 x a or  $1 \frac{1}{2a}$  mm. In (1) the ratio is 1:2  $\frac{1}{2}$ ; in (2), 1:1 1/2. Even though you may mean "times wider than", it is better to avoid using the expression because some people interpret it to mean the same as "times as wide as" and will argue the point.

I'm still bothered about how to describe an elongate structure that transverse to the main axis of the abdomen of a dragonfly. Which is its length? If one considers it in relation to the long axis of the abdomen, its width is greater than its length, but according to its longest dimension, its length greater than its width! The latter is

# Available Reprints

From the Library of Mary Davis line and there can hardly be such a thing Ries .-- Mrs. Ries willed her books on Odonata to the Smith College Library, but it men. However, "two medial stripes" would was her wish that her reprints be given to the persons who could make the best use of them. Being her close friend, I promised shortly before Mrs. Ries' death to do this for her. A complete list has not been typed as yet, but anyone who has a special need for a particular paper or papers, anyone who would like a list, or anyone who sent her his own reprints and would prefer to distribute them himself should write me. There will be no charge for any of these.

> the Library of Rudolph G. From Schmieder .- Reprints of Dr. Calvert's papers in the library of the late Dr. Schmieder were purchased by me. Most of them are still available at cost plus postage. A price list will be sent upon request. Address reprint requests to me at the above address.

Some Often Repeated Misspellings of Names for American Odonata

Aesthna not Aeschna, but in combining forms still -aeschna

Corduliinae not Cordulinae

\*Cordulegaster erronea not erroneous

Hetaerina not Heterina

\*Lestes inaequalis not inequalis or inequalus

Leucorrhinia not Leucorhinia or Leucorhinnia

Nehalennia not Nehallena or Nehallenna

Pantala hymenaea not hymenea

As for -neura versus -neura, the Latin spelling has been used more often than the Greek.

\*As pointed out by Dr. B. E. Montgomery -gaster is feminine and species names in

the adjectival form in the genus Cordulegaster should have the a ending of us.

Great care should be taken before making any changes in the ending of a name. the case of Lestes, a masculine name, the species name forficula is a feminine noun, sigma is a neuter noun, and vidua a feminine noun. These species names are used in apposition and their endings should remain as they are.

NOTE: Some changes in names such as Hetaerina, inaequalis, and hymenaea came as the result of a wide move at one time to shorten all such ae ligatures, pronounced in classical Latin as diphthongs, to e. More recently one of the commissions on Zoological Nomenclature recommended that the next reviser delete the terminal i from such names as ramburii, selysii, etc. Some editors have made it mandatory that authors follow this, but the latest recommendation from the commission says that we should adhere to the original spelling unless a printer's error was demonstrated. Until another commission reverses this decision it seems we should use the original spelling. the case of Enallagma daeckii and Acanthagrion kennedii, species named Daecke and Kennedy respectively, to drop the final i would certainly be a mistake. In choosing the name daeckii Calvert, according to a recent letter from B. E. Montgomery, probably latinized the ending, changing Daecke to daeckius, daecki-, and finally daeckii. He thinks Williamson followed a latinization of Kennedy by substituting -i for -y, as y does not occur in the ancient Latin alphabet. agrees with Mrs. Gloyd that there is no justification for restoring the Selysian and Ramburian spelling in names containing -neura (neura). He says U and V were mere graphic variations of the same letter, and as late as the 18th century some Westfall, Jr.

### WORK IN PROGRESS

In preparing for relatively intensive field work on Tachopteryx thoreyi (Petaluridae), I would greatly appreciate any information whatever that others might be willing to send me concerning collection localities, sightings, hazy field recollections, private collections, etc. All information will be either acknowledged or else returned with a suggestion to publish it. This work will be done in conjunction with a continuing, long-term project on another petalurid, Tanypteryx hageni, in the West. - Dr. Perry Edward Turner, Jr., Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, 02138.

The Odonata of central Panama is the object of a study by T. Donelly and Eugene Morton (Smithsonian Tropical Re-Many specimens of search Institute). interest were collected by especial Oliver Flint. Over one hundred and fifty species have been collected, including several new species (four Heteragrion, five Palaemnema, one each of Triacanthagyna, Cannaphila, Epipleoneura, and Gomphoides), several problematical forms (Progomphus cf. pygmaeus, Heteropodagrion, two forms of Miocora, four Argia species, of Idiataphe, Planiplax, and females Ischnogomphus, and Desmogomphus). addition, there are several significant records (Erpetogomphus tristani, Macrothemis declivata, Nephepeltia leonardina, Palaemnema mutans, Thaumatoneura inopinata), and captures of numbers of certain species which are poorly represented in collections (Neocordulia longipollex, Philogenia augusti, Epigomphus subquadricies, Gomphoides appendiculatus). The Odonata fauna is surprisingly rich here, with forest species especially impressive. Behavioral and distributional studies by Morton are focused on the interspecific behavior of Hetaerina spe-English dictionaries did not separate the cies, and on the wet season vs. dry sealetters in alphabetical sequence. - M. J. son behavior of some common polymorphic species, such as Uracis fastigiata and

Erythrodiplax funerea and umbrata. Morton has also studied swarming behavior of libellulines. Still unsettled is the problem of the status of Tramea binotata and "walkeri" here, with the latter form possibly a mature version of a juvenile binotata. - Thomas W. Donnelly, Dept. of Geology, State University of New York at Binghamton, Binghamton, N. Y. 13901.

Since my request was made in the last issue of SELYSIA for distribution records of Cordulegaster sayi specimens present in collections. I have had few replies. Mrs. Gloyd wrote that there are Univ. of Florida, none in the University of Michigan col- Tennessen lections. Also Harold B. White wrote that there are only two specimens under this label at the Museum of Comparative Zoology at Harvard. One he says is from Georgia and the other obviously incor- : rectly determined. I would still like more information on specimens of this species previously reported from other states if available. In the spring of 1971 Dr. Clifford Johnson and I reared a number of nymphs of sayi, both sexes. from the same place where I collected the nymphs mentioned in the last SELYSIA. The Dr. B. Elwood Montgomery. nymph does not seem to be the same as the one from North Carolina which Needham in 1903 described as that species by supposition. We hope to publish a paper soon with a full description .- M. J. Westfall, Jr.

- Does anyone know where I can obtain specimens of Telebasis corallina for study? We have a possible new species closely related to corallina and females taken in association with males are needed for comparison. It was described from Brazil and has also been reported from Venezuela. If you can help it will be appreciated very much. - M. J. Westfall, Jr.

I am currently engaged in a systematic study of the genus Tetragoneuria in the southeastern United States, and would like to examine as many specimens as possible of all the species which occur in this range. If anyone has available to loan, I would greatly appreciate seeing them, especially any labeled or thought to be petechialis from Texas or the surrounding states. In addition, any knowledge of unpublished records or early and late flight dates of any of the southeastern species would be likewise welcome. These can be sent to me in care of Dr. M. J. Westfall, Dept. of Zoology, Gainesville. - K. J.

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At the request of several correspondents we are beginning to list the bibliographic references for current papers in which Odonata are mentioned. The present citations are for the year 1970 and are not meant to be complete, but are the ones that have thus far come to our attention. They were compiled mostly by We have not personally seen some of the papers listed In the next number we will include here. additional papers from 1970 that are brought to our attention. If readers have papers not listed it would be helpful if they would send us a reprint and we will be sure to include the reference.

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#### DESIRED ADDRESSES

The mailing list of Selysia doubtlessly includes misspelling and incomplete address data. We now have the opportunity to put the address list on master sheets for xerox duplication. Please notify us soon if there are errors in your address as it appears on this issue and we will correct it on the subsequent issue.

The following names have appeared on the mailing list in the past and we now have no known current address. If any reader knows the present address for any of these individuals, please let us know. Finally, we will be happy to add the names of anyone interested in Odonata if supplied with appropriate addresses.

J. P. Aggarwal Takashi Andoh Charles Dehange Frederick Dobson Robert E. Gross Sue Torras Mrs. Ben Watson