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ADDITIONAL IOWA SPECIES OF DOLICHOPODAE
(DIPTERA) WITH SOME ECOLOGICAL NOTES

B. G. BERGER AND H. E. JAQUES

A family that is easily distinguished from all other families, small to medium sized, and sufficiently abundant to make collecting enjoyable and profitable, has the desirable characteristics for the beginning Entomologist. Such is the Dipterous family *Dolichopodae*. The discal and the second basal cell of the wing are coalescent. Wing venation is simple, but the last section of the fourth longitudinal vein has very striking and definite characteristics. In the genera *Sciapus*, *Condylostylus* and *Laxina*, the fourth vein has a divergent fork; in others, it may be straight, curved, bent abruptly in the middle, broken with a stump vein at the bend, or it may be parallel, or convergent to the third longitudinal vein. The tarsi



Fig. 1. *Dolichopus jaquesi* F. C. H. & G. F. K.

and tibiae of the fore and middle legs are often highly ornamented with secondary sexual characteristics. Even the antennae in a few species have enlarged segments which aid in the determination of the species.

The entire ventral side of the head is occupied by the oral opening. Both sides of the head are covered by the eyes leaving only a small face and front. The three jointed antennae always bear an arista. This arista, which may or may not be elongated infrequently bears a lamella, and may be apical, dorsal or ventral to the third segment.

The genera, *Sciapus*, *Condylostylus* and *Laxina* are usually found

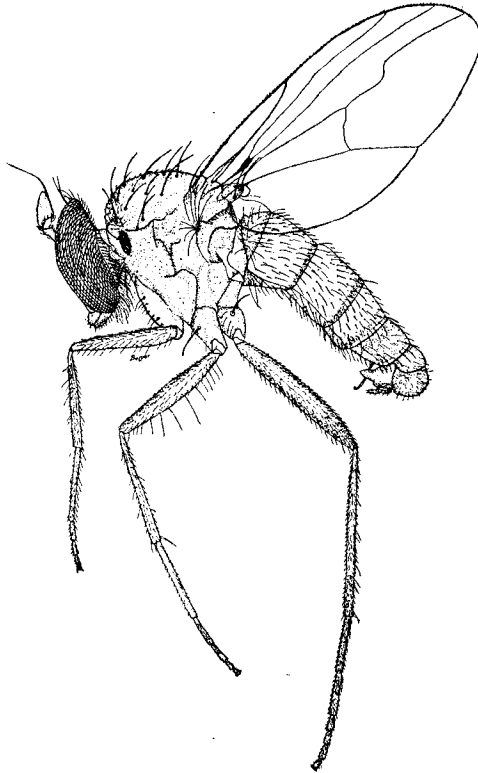


Fig. 2. *Argyra albicans* Loew. ♂

on garden flowers and bushes such as the blackberry and raspberry. *Diaphorus* and *Chrysotus* are easily collected on shaded lawns or on small plants bordering a stream or pond. *Campsicnemus* were found, only in Wild Cat Den State Park where they were fairly abundant around the mineral streams. *Rhaphium*, *Calyxochaetus*, *Peloropecodes*, *Syntormon*, *Nothosympycnus*, *Gym-*

nopternus, *Tachytrechus* and *Thrypticus* are taken sparingly by sweeping in the grass and weeds in the vicinity of water. *Argyra* may be collected in damp places covered with a rich vegetation. *Neurigona* are taken from the sides of trees and on high damp, shaded rocks where they wait for their food; which is made up of small, soft-bodied insects, to pass by. Our two Iowa species of *Hydrophorus* have both been taken from the surface of ponds and lakes where they glide close to the water surface searching for food. Specimens of *Dolichopus* are easily distinguished by having two or more bristles on the basal segment of the posterior tarsus. Species of this genus are found on the prairie, along water courses, in the woodland and in bogs and swamps. This genus is the largest and most common of the family *Dolichopodae*. Two species of *Pelastoncurus* are particularly abundant along lightly-shaded streams and lakes where they occur on the mud, sand and gravel.

The authors wish to thank Mr. F. C. Harnston for much help and encouragement with this problem.

The following list of *Dolichopodae* are found in the Iowa Insect Survey Collection at Iowa Wesleyan College. A large percentage of these species were secured through work done at the Iowa Lakeside Laboratory and the trips throughout the state which are associated with the Lakeside Laboratory research problem.

<i>Sciapus scintillans</i> Lw.	<i>Campsicnemus hirtipes</i> Lw.
<i>Sciapus unifasciatus</i> Say.	<i>Argyra albicans</i> Lw.
<i>Sciapus comatus</i> Schiner	<i>Argyra calceata</i> Lw.
<i>Condylostylus siphon</i> Say.	<i>Rhaphium melampus</i> Lw.
<i>Condylostylus furcatus</i> V. D.	<i>Rhaphium rotundiceps</i> Lw.
<i>Condylostylus melanopus</i> Lw.	<i>Rhaphium fumipenne</i> Lw.
<i>Laxina patibulatus</i> Say.	<i>Rhaphium vanduzeei</i> Curran
<i>Laxina scobinator</i> Lw.	<i>Calyxochaetus frontalis</i> Lw.
<i>Laxina caudatus</i> Wd.	<i>Syntormon cinereiventris</i> Lw.
<i>Laxina flavipes</i> Ald.	<i>Sympycnus lineatus</i> Lw.
<i>Laxina inermis</i> Lw.	<i>Sympycnus nodatus</i> Lw.
<i>Laxina calcaratus</i> Lw.	<i>Sympycnus frontalis</i> Lw.
<i>Diaphorus leucostoma</i> Loew	<i>Nothosympycnus nodatus</i> Lw.
<i>Diaphorus sodalis</i> Lw.	<i>Neurigona aestiva</i> VanD.
<i>Diaphorus spectabilis</i> Lw.	<i>Neurigona aldrichi</i> VanD.
<i>Diaphorus repandus</i> V. D.	<i>Neurigona carbonifer</i> Lw.
<i>Chrysotus barbatus</i> Lw.	<i>Neurigona floridula</i> Wheel.
<i>Chrysotus cornutus</i> Lw.	<i>Neurigona lateralis</i> Say.
<i>Chrysotus exiguus</i> VanD.	<i>Neurigona rubella</i> Lw.
<i>Chrysotus longimanus</i> Lw.	<i>Medeterus veles</i> VanD.
<i>Chrysotus obliquus</i> Lw.	<i>Medeterus vittatus</i> VanD.
<i>Chrysotus pallipes</i> Lw.	<i>Peloroepodes acuticornis</i> V. D.
<i>Chrysotus picticornis</i> Lw.	<i>Thrypticus fraterculus</i> Wh.

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| Thrypticus willstoni Wh. | Dolichopus ovatus Lw. |
| Thrypticus singularis Ald. | Dolichopus pachynemus Lw. |
| Hydrophorus aestuum Lw. | Dolichopus olumipes Scop. |
| Hydrophorus pilombris Wheel. | Dolichopus mysota O. S. |
| Scellus exustus Wik. | Dolichopus procerus V. D. |
| Dolichopus absonus V. C. & A. | Dolichopus ramifer Lw. |
| Dolichopus acuminatus Lw. | Dolichopus retinens V. C. & A. |
| Dolichopus albicoxa Ald. | Dolichopus scapularis Lw. |
| Dolichopus jaquesi H. & K. | Dolichopus setosus Lw. |
| Dolichopus barbicauda V. C. & A. | Dolichopus socius Lw. |
| Dolichopus batillifer Lw. | Dolichopus sarotes Lw. |
| Dolichopus bifractus Lw. | Dolichopus terminalis Lw. |
| Dolichopus calcaratus Ald. | Dolichopus variabilis Lw. |
| Dolichopus comatus Lw. | Dolichopus virgilans Ald. |
| Dolichopus canadensis V. D. | Dolichopus walkeri V. D. |
| Dolichopus bakeri Cole | Gymnopternus barbatulus Lw. |
| Dolichopus cuprinus Wiedemann | Gymnopternus crassicauda Lw. |
| Dolichopus dakotensis Ald. | Gymnopternus exilis Lw. |
| Dolichopus deterius Lw. | Gymnopternus frequens Lw. |
| Dolichopus eudactylus Loew. | Gymnopternus meniscus Lw. |
| Dolichopus flagellitenens Wheel. | Gymnopternus scotias Lw. |
| Dolichopus indigena V. C. & A. | Gymnopternus minutus Lw. |
| Dolichopus latipes Loew. | Tachytrechus binodatus Lw. |
| Dolichopus lobatus Lw. | Pelastoneurus lamellatus Lw. |
| Dolichopus longipennis Lw. | Pelastoneurus vagans Lw. |
| Dolichopus melanocerus Lw. | |

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