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## A Preliminary List of the Dytiscidae Known to Occur in Iowa

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## **A Preliminary List of the Dytiscidae Known to Occur in Iowa**

By J. C. SCHAFFNER and H. E. JAQUES

These predacious diving beetles constitute the largest family (Dytiscidae) of Coleoptera inhabiting water. They are often seen hanging head downward in the water with the tip of the abdomen exposed at the surface.

The members of this family are rather oval and flattened in shape. The elytra are usually hard and shiny, often with many punctures. Some of the smaller species are pubescent. The bare filiform antennae are glabrous and have eleven segments. The hind legs are flattened and have five tarsal segments which are fringed with long hairs making them strongly adapted for swimming. The beetles are usually brownish black or olive black in color and sometimes the margin of the thorax and elytra are marked with yellow or more rarely red. Occasional species also have a design in these colors on their back.

The spiracles are located on the upper surface of the abdomen and are covered by the elytra. The dytiscids carry considerable quantities of air beneath the elytra or attached to the posterior extremities as a bubble. This enables them to maintain respiration for a longer period of time under water.

Members of this family abound in streams and ponds, the latter being preferred by the majority. They are strong flyers and are often attracted to lights even at considerable distances from water. During the winter or during extreme dry spells they burrow into the mud around their habitats for hibernation or for aestivation.

They are carnivorous and feed upon small fishes, tadpoles and other water inhabitants. Dead animal matter also frequently serves for food.

The eggs are inserted singly into the stems of aquatic plants. The larvae also live in the water and because of their voracious carnivorous habits they are called "water tigers." They are elongate, fusiform, or cylindrical in form and have a rounded and flattened head. They pupate in an earthen cell out of the water.

The adults and larvae serve as food for many animals such as fish, ducks, and turtles. Several species of tiny wasps enter the water and parasitize the eggs. In the Orient the eggs are taken as food and as medicine by the people.

Approximately 2,050 species are known to occur throughout the

world with over three hundred species inhabiting North America. Fifty-two species are known to occur in Iowa.

The list of Iowa species which follows includes both those represented in the Iowa Insect Survey collection at Iowa Wesleyan College and in the records of Dr. H. F. Wickham. The names preceded by an asterisk are those which Dr. Wickham reported and are not yet in the Iowa Insect Survey collection. The determinations have been for the most part made or checked by specialists. The Leng catalog number precedes the scientific name in each instance.

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|---|--|
| *2346 <i>Hydrocanthus iricolor</i> Say            | 2550 <i>Agabus punctatus</i> Melsh             |
| 2351 <i>Laccophilus maculosus</i><br>(Germ.)      | 2551 <i>Agabus aeneolus</i> Crotch             |
| 2359 <i>Laccophilus fasciatus</i> Aube            | *2552 <i>Agabus aeruginosus</i> Aube           |
| 2374 <i>Desmopachria convexa</i> (Aube)           | 2556 <i>Agabus taeniolatus</i> (Harr.)         |
| 2388 <i>Bidessonotus pulicarius</i><br>(Aube)     | 2557 <i>Agabus disintegratus</i> (Cr.)         |
| *2390 <i>Bidessus affinis</i> (Say)               | *2587 <i>Ilybiosoma bifarius</i> (Kby.)        |
| 2394 <i>Bidessus lacustris</i> (Say)              | 2598 <i>Ilybius fenestralis</i> Say            |
| 2395 <i>Bidessus fuscatus</i> (Cr)                | 2603 <i>Matus bicarinatus</i> (Say)            |
| *2398 <i>Bidessus granarius</i> (Aube)            | 2605 <i>Copelatus glypticus</i> (Say)          |
| 2400 <i>Celina angustata</i> Aube                 | 2610 <i>Coptotomus interrogatus</i><br>(Fabr.) |
| 2403 <i>Hygrotus inaequalis</i> Fabr.             | 2622 <i>Rantus notatus</i> (Fabr.)             |
| *2407 <i>Hygrotus acaroides</i> Lec.              | *2623 <i>Rantus bistriatus</i> (Bergst.)       |
| 2409 <i>Hygrotus dispar</i> Lec.                  | 2632 <i>Colymbetes sculptilis</i> Harr.        |
| 2420 <i>Hygrotus nubilus</i> Lec.                 | 2636 <i>Dytiscus fasciventris</i> Say          |
| 2424 <i>Hygrotus impressopunctatus</i><br>(Sch.)  | *2637 <i>Dytiscus hybridus</i> Aube            |
| 2425 <i>Hygrotus laccophilinus</i> Lec.           | *2640 <i>Dytiscus cordieri</i> Aube            |
| *2429 <i>Deronectes catascopium</i> (Say)         | 2646 <i>Dytiscus harrisi</i> Kby.              |
| 2447 <i>Hydroporus undulatus</i> Say              | 2647 <i>Hydaticus modestus</i> Shp.            |
| *2457 <i>Hydroporus carolinus</i> Fall            | 2649 <i>Hydaticus piceus</i> Lec.              |
| *2461 <i>Hydroporus hybridus</i> Aube             | 2651 <i>Acilius semisulcatus</i> Aube          |
| *2471 <i>Hydroporus striatopunctatus</i><br>Melsh | 2652 <i>Acilius fraternus</i> Harr.            |
| 2514 <i>Hydroporus niger</i> Say                  | 2653 <i>Acilius mediatu</i> s (Say)            |
| *2521 <i>Hydroporus stagnalis</i> G. & H.         | 2654 <i>Thermonetus ornaticollis</i><br>(Aube) |
| 2543 <i>Agabus obtusatus</i> (Say)                | 2655 <i>Thermonetus basillaris</i> Harris      |
| 2548 <i>Agabus semivittatus</i> (Lec.)            | *2659 <i>Graphoderus liberus</i> Say           |
|   | 2660 <i>Graphoderus cinereus</i> (L.)          |
|   | *2667 <i>Cybister fimbriolatus</i> (Say)       |

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