Amphibians and Reptiles in Minnesota

By John J. Moriarty, and Carol D. Hall. 2014. University of Minnesota Press, Suite 290 111 Third Avenue South, Minneapolis, MN, USA, 55401. 372 pages, 39.95 CAD, Paper.

This new survey of the Minnesota herpetofauna comprehensively updates *Amphibians and Reptiles Native to Minnesota* by Barney Oldfield and John J. Moriarty (1994; reviewed by FRC 1998 Canadian Field-Naturalist 112(1): 170–171). The extent of new information now available is reflected in a Resources section which includes 6 Minnesota, 6 Regional (Upper Midwest), 12 North American, and 8 General references published since the earlier treatment. This is further emphasized in the Literature Cited, which has 144

post-1994 entries in its 20-page coverage (included are some duplications from the more general Resources listings).

Minnesota lies to the south of the boundaries of western Ontario and Manitoba. It has a primarily northeastern and east-central North American herpetofauna so it is not surprising that of the 53 species recorded for the state, 48 are shared with Canada. The representation of the two classes is unbalanced as there are more shared reptiles but many barely enter Canada whereas, in contrast, many of the fewer shared amphibian species present have moved extensively into the north. In all, 22 amphibians (14 frogs and toads and 8 salamanders), and 26 reptiles (2 lizards, 16 snakes and 8 turtles) recorded also occur in Canada. For seventeen (1 frog, 1 toad, 3 salamanders, 1 lizard, 8 snakes, 3 turtles) that are shared with Canada the Minnesota occurrences are not linked to Manitoba or northeastern Ontario but to populations south of the Great Lakes. Three of the species now included have been added to the state list from the eastern part of Minnesota since 1994 and it is suggested that three additional species (1 frog, 1 toad and 1 spadefoot) that occur near the western border of the state may yet be found within it. One of these occurs in Manitoba.

The contents open with a map of Minnesota counties with arbitrary divisions of the large northeast counties (this map is copied for quick referenced on the inside back cover). A forward stresses the varied interests which this book serves. A preface and acknowledgments deal with the herpetological activity in the state and the growth of interest in conservation. An introduction covers the definition of "herp", the history of herpetology in Minnesota, the Minnesota Department of Natural Resources Nongame Wildlife Program, Minnesota Herpetological Society, and other herpetological efforts, amphibian and reptile habitats (with coloured maps of ecological provinces, sections, and subsections), natural vegetation of Minnesota, average precipitation, temperature, and a table of amphibian and reptile distributions by ecological section. Watersheds are discussed and mapped. A table presents amphibian and reptile distributions by habitat type. Aquatic habitats are lakes and ponds, marshes, prairie wetlands, and peatlands. Terrestrial habitats are flood-plain forest-coniferous-northern hardwood forest, and prairies. Disturbed areas are discussed separately as agricultural lands and urban and suburban habitats. Next come suggestions for observing and studying amphibians and amphibians and reptiles encompassing ethical field methods, field study and care of captives. A conservation section, divided between habitat loss and pollution is followed by amphibian declines, diseases, harvesting pressures, and persecution. Common amphibian and reptile problems covers snakes in house, garage, and yard invasions, salamanders in basements, turtles nesting in the yard, snapping turtles eating ducklings, and salamanders, frogs, on the road or yard.

A checklist gives the original describer(s), the year named for each genus, species and subspecies. Systematics and taxonomy follow Frost *et al*. 2006. Bulletin of the American Museum of Natural History, and English names follow Crother, *editor*, 2012, SSAR Herpetological Circular 39.

Species accounts are grouped by class and, within each, by family, each prefixed by summaries of features. Each individual species account starts with current English (common) and scientific name, and continues with description, and distribution in United States and Canada (but statements for the latter are vague and often omit actual extent apparently in an effort to be concise). A small map of Minnesota counties shows museum records indicated by half-filled (pre-1960) or solid (post-1960) circles and literature or sighting records as open circles. Habitat, and life history, and remarks (including legal status) complete each account.

Species of possible occurrence include mention of released exotics and abbreviated species accounts for three species that further field studies in the state may yet find. Concluding the book is a glossary giving definitions from amelanism to ventral, resources (references and organizations), literature cited, and index to genera, species and subspecies.

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