

**THE GROUND MANTIS, *LITANEUTRIA MINOR* (DICTUOPTERA: MANTIDAE)  
IN BRITISH COLUMBIA**

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**Abstract**

The status of the Ground Mantis, *Litaneutria minor* (Scudder), in British Columbia and Canada is discussed, and brief notes on its natural history are given. Characteristics for separating this species, the only native Canadian mantis, from the introduced and sympatric *Mantis religiosa* L., are tabulated.

Only three species of Mantidae (Dictyoptera) are known from Canada, representing two subfamilies. The Mantinae include the European Praying Mantis, *Mantis religiosa* L., and the Chinese Mantis, *Tenodera aridifolia sinensis* Saussure; the Amelinae are represented by the Ground Mantis, *Litaneutria minor* (Scudder). *M. religiosa* and *T. aridifolia sinensis* were introduced into the eastern United States in the 1890s and subsequently spread to southern Ontario and Quebec (Kevan 1979). The former was also introduced into the southern Okanagan Valley of British Columbia for biological control purposes in 1938 and 1939 (Buckell 1941). For many years it apparently was rather scarce, and few specimens were collected; since the 1970s, however, the population has been frequently observed between Okanagan Falls and Osoyoos. Both brown and green colour phases occur there.

*Litaneutria minor* is widespread in the drier regions of North America from Mexico, Texas and California north to North Dakota and British Columbia (Essig 1926, Vickery and Kevan 1983, 1986). It is the only mantid native to Canada, where it is rather rare and seldom collected, being known only from the southern Okanagan Valley in British Columbia. Vickery and Kevan (1983) note that although the species is not yet recorded from Manitoba, Saskatchewan, or Alberta, it may be expected to appear in the southernmost parts of these provinces.

Canadian Material Examined. BRITISH COLUMBIA: Oliver, 1000', 12.viii.1953, 2 males (D.F. Hardwick) (CNC); *ibid.*, 18.viii.1953, 4 males (D.F. Hardwick) (CNC); *ibid.*, 30.viii.1953, 1 male (D.F. Hardwick) (CNC); Oliver, 9 mi S - Haynes Lease Ecological Reserve, 1.x.1963, 1 female in funnel trap (W.B. Preston) (specimen apparently donated to Spencer Entomological Museum U.B.C., but cannot now be located); Oliver, east bench 1100', 29.viii.1920, 1 female - head, prothorax, one foreleg only (E. Hearle) (CNC); Osoyoos, Haynes Point Prov. Park, 24.viii.1986, 1 male at light inside changeroom (M. Sarell) (BCPM).

The above records represent all but two of the Canadian specimens known to me. Vickery and Kevan (1983) list two males collected at Oliver (1000') on 17 and 18 July 1953 by J.E.H. Martin and D.F. Hardwick, respectively. The specimens were received by the Lyman Entomological Museum, McGill University on exchange from the Canadian National Collection: they are now in poor condition (D. McE. Kevan, pers. comm.). Habitats, habitat and life history are summarized by Vickery and Kevan (1983, 1086). *Litaneutria* is a ground-dweller, but sometimes is found on low vegetation; Hearle's specimen (Osoyoos, 1920) was collected on a sage brush (Buckell 1922). In Texas, Roberts (1937) found the mantid mostly on low, rocky ridges sparsely clothed with bunchgrass. It can run with great agility and is often difficult to capture (Essig 1926), but pan traps are often effective (Barnum 1964, Vickery and Kevan 1983, 1986). The gravid female collected by W.B. Preston at Oliver in 1963 was captured in a funnel trap designed to collect rattlesnakes. Flying males are often attracted to lights; all of the 11 males collected in Canada were collected at or near lights in July and August.

Small egg masses, about 7 mm long and rather rectangular in shape are deposited on the stems of low shrubs. These eggs overwinter in our area, and hatch in 185 to 205 days after laying. Nymphs mature in about 13 weeks. Roberts (1937) recorded males living up to 47 days and females up to 156 days.

The two species of mantids in British Columbia's Okanagan Valley are sympatric at least from Oliver south to the International Boundary. They can be separated by the characteristics listed in Table 1.

Table 1. Some characteristics separating *Litaneutria minor* from *Mantis religiosa*

| Species                  | Length of adult | Colour               | Setae on antennae and anterior margin of tegmina of male | Wing development   |
|--------------------------|-----------------|----------------------|--|--|
| <i>Litaneutria minor</i> | less than 35 mm | buff to dark brown   | present  | females brachypterous (tegmina equal to, or less than, 1.3 length of abdomen); males usually fully winged; male usually with dark spot on hindwing |
| <i>Mantis religiosa</i>  | more than 35 mm | light brown or green | absent   | both sexes fully winged  |

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#### ADDENDUM

As this paper was going to press, I captured a female *Litaneutria* at the Haynes Lease Ecological Reserve, located at the north end of Osoyoos Lake. It was sitting in the open on a dirt road at 16:00 h PDT on 24 August 1987. The specimen is in the collection of the B.C. Provincial Museum, Victoria.