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NORTHERLY-OUTLING RECORDS OF TWO SPECIES OF HAWKMOTHS (LEPIDOPTERA: SPHINGIDAE) IN MICHIGAN

John F. Douglass

The Grand Traverse Region of Lower Michigan is of special interest zoo­
geographically in that it includes the northernmost known localities for vari­
ous species of organisms characteristic of the Carolinian Biotic Province
(Douglass 1977, 1983; McCann 1979).

On 5 July 1984 I found a gravid female achemon sphinx (Eumorpha ache­
mon [Drury]) dead on Figg. Rd., Benzie Co. (T26N, R16W, boundary Sec.
14–15, N of jct. Graves Rd.). The specimen (collected) is in fresh condition, and
appeared to have been rather freshly killed: greenish eggs had spilled from the
ruptured abdomen and were congealing in the sand. The most northerly previ­
ously recorded Michigan localities for E. achemon are in Oceana, Midland, and
Bay Counties (Moore 1955, M. C. Nielsen, pers. comm.).

On 21 May 1988 I collected a male Abbott's sphinx (Spe­
hedina abbottii­[Swainson]) beneath a mercury vapor light at the Douglass family cottage
overlooking Green Lake, Grand Traverse Co. (T26N, R12W, SW1/4 Sec. 21).
The specimen is in fresh condition. The northernmost previously recorded
Michigan localities for this species are in Ingham, Livingston, and Bay Coun­
ties (Moore 1955, M. C. Nielsen, pers. comm.).

These new moth records extend each species' known Michigan range three
tiers of counties to the north. It is not clear whether or not the specimens at
hand come from resident populations. Average temperatures, recorded at Tra­
verse City, were not appreciably higher than normal in the two months preced­
ing either date of capture. However, southern Lower Michigan experienced an
extreme drought during June 1984 and had its driest month of May on record
in 1988 (U. S. Dept. of Commerce 1984, 1988a, b). The possibility that the
specimens captured represent strays or temporary colonists from the south
cannot be ruled out.

General amelioration of climates following the latest event of glaciation in
the Great Lakes Region is viewed as having permitted northward range
expansions by a variety of organisms (de Vos 1964). Within historic times,
northward range expansions by some species have apparently been acceler­
ated by logging and agricultural clearing (Douglass 1977). In addition,
account should be taken of the findings of Cleland (1966, 1973): During an
earlier interval or intervals, the northward 'tongue' of distribution of Carolin­
ian species in western Lower Michigan was apparently more pronounced than
at present. For example, northward range expansions by various species
occurred along the Traverse Corridor (narrow coastal strip) during a warm
climatic phase ca. 1000 yr B.P., and southward range restrictions (evident
from the relictual nature of various plant, animal, and archaeological locali­
ties) apparently accompanied a return to cool, moist conditions beginning ca.
1300 A.D. Disjunct, northern populations of some species of insects currently
found in northwestern Lower Michigan may thus be relictual.

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LITERATURE CITED