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# PUPA OF PHALERIA ROTUNDATA LECONTE (COLEOPTERA: TENEBRIONIDAE)

#### Ian Moore<sup>1</sup>

It is not necessary to apologize for making known fragments of the insect fauna of the seabeach of Pacific North America. This fauna commands attention. Among its several aspects are (1) it is linear, extending several thousand kilometers from north to south, but being only a few hundred meters wide, (2) its species are all confined within the seabeach limits, and (3) it is a threatened fauna particularly in southern California where the habitat is being rapidly altered by man for purposes of industry, housing and recreation. Preservation of specimens from this fauna and recording of observations on its ecology at this time seems of paramount importance.

Description of the larva and ecological notes on *Phaleria rotundata* LeConte have been made (Moore, 1975), but no opportunity to attempt to rear specimens presented itself at that time. Since then, pupae have become available and are described below.

### Pupa of Phaleria rotundata LeConte

Exarate, elongate. Length 11 mm. Thorax and abdomen pale, mottled grayish pink; head, appendages and apex of abdomen dark grey with a pinkish cast. Head reflexed so that it is not visible from above; without ocelli or eye spots; on each side with a single long seta above the antenna, one basal and two anterior to the antenna, each placed well in from the side margin but not discal, setae not placed on tubercles; a few fine hairs along the side margins; disc of head smooth, labrum with a single long seta each side; mandible with a single seta on outer margin; maxilla with a single seta on outer margin; antenna without setae or pubescence. Pronotum with a pair of tuberculate setae on the disc near the base, disc otherwise smooth; lateral margin with four or five small membraneous protrusions each of which is with a single seta at apex, interspersed with minute setae which continue along the anterior margin but not the basal margin; anterior and lateral margin forming a single gentle arc becoming sinuate before the acute hind angles; base nearly straight but gently sinuate near the basal angles.

Elytra about three times as long as wide, bluntly pointed at apices, without setae or pubescence. Wings much narrower and less than half as long as elytra, without setae or pubescence. Femora with scattered sparse minute tuberculate pubescence; legs otherwise without setae or pubescence. Tergites and all but last three sternites without pubescence; last three sternites with sparse scattered pubescence. Metathorax and first six abdominal segments with an elaborate membraneous protrusion at each lateral margin. The protrusions are similar but not identical even on the same segment. Protrusions centrally located on each segment, about half the length of the segment, toothed at anterior and posterior outer corners with the area between gently arcuately emarginate, the anterior margin with several small teeth; protrusion of sixth segment smaller and simpler than those of preceding segments. Apex of abdomen with two small spine-like cerci.

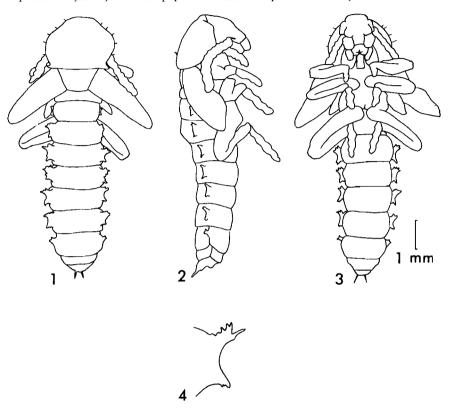
Two specimens, one small and deformed, reared from larvae collected from wrack on the beach at LaConchita, Ventura County, California, by Ian Moore.

The two larvae were collected August 18, 1975. They were confined in a one-quart plastic container with a wire screened lid in which was about a 2" layer of damp beach sand and several pieces of fresh seaweed. It had been assumed (Moore, 1975) that the larvae fed on wrack but there was no evidence of such feeding and the larvae did not grow larger in a full month of confinement before pupation took place in the sand at the

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bottom of the container. It occurred on September 18, 1975, the small larvae becoming a small, badly deformed, asymmetrical pupa, the large one apparently normal. On September 22, 1975, the active pupae were killed and preserved in 70 percent alcohol.



Pupa of *Phaleria rotundata* LeConte. (1) Dorsal aspect, (2) lateral aspect, (3) ventral aspect, (4) protrusion of second abdominal segment, not to same scale.

### LITERATURE CITED

Moore, Ian. 1975. Notes on *Phaleria rotundata* LeConte with description of the larva (Coleoptera: Tenebrionidae). The Great Lakes Entomol. 7:99-102, 8 figs.