



Slender mud-dauber wasps: genus *Sceliphron*

Mud nests are constructed by a wide variety of wasps representing the families Vespidae, Sphecidae and Pompilidae, with the greatest number belonging to the first of these. This information sheet relates to just one genus, *Sceliphron*, in the family Sphecidae.

Members of this genus are easily distinguishable from other mud-nest builders by the extraordinarily thin, straight, stalk-like first segment of the abdomen, also known as the petiole (see image below). They are of moderate to large size (body length 17-26 mm) and largely black but with some areas yellow. They hunt spiders of various kinds as food for their larvae. All are solitary, each female building and provisioning its own nest. These wasps are usually inoffensive although females will sting if handled.



Slender mud-dauber wasp, *Sceliphron laetum*, showing characteristic stalk-like first segment of abdomen (or 'petiole'; arrowed). The bulbous hind section of the abdomen is known as the 'gaster'.

The only other mud-nest builders in the Perth Region that have the abdomen strongly stalked are members of the genus *Delta* (family Vespidae). *Delta* differs from *Sceliphron* in the following ways: stalk-like first segment of abdomen not straight and not of uniform thickness; wings held out sideways in a V-shape when insect is settled (not folded over the body); colouration more orange and black, rather than yellow and black (see image below); prey items are caterpillars, not spiders.



A female *Delta* on its characteristic vase-like mud cells.

The genus *Sceliphron* occurs worldwide and two species are generally recognized as being native to Australia: *S. laetum* and *S. formosum*. The former occurs Australia-wide; the latter was originally confined to northern and eastern Australia but is now known to

inhabit the Darling Range east of Perth. The North American *S. caementarium* has spread across the Pacific and has become established in eastern Australia but, as far as known, has not yet reached Western Australia. Specimens from a single nest found at Parkerville in the Darling Range appear to represent an additional species, the identity of which has yet to be established. This information sheet is intended to permit ready recognition of this unidentified form and its nests. More specimens may help lead to an identification. It is also hoped to map this form's geographic range and to determine its preferred prey.

Species characteristics

Sceliphron laetum

(Figs 1, 3)

- Face covered by dense golden hair; no yellow integumental patch on lower face (Fig. 1; compare *S. formosum*).
- Thorax dorsally with at least one yellow patch medially between wing-bases (Fig. 3).
- Hind part of thorax with yellow patch just above insertion of abdominal petiole but lacking paired spots.
- Abdominal gaster yellow basally and apically.

Sceliphron formosum

(Figs 2, 5)

- Face with a covering of golden hair, sparse ventrally; lower face with a yellow integumental patch medially (Fig. 2).
- Thorax dorsally with a yellow patch between wing bases.
- Hind part of thorax with a yellow patch just above insertion of abdominal petiole and four other yellow spots (Fig. 4).

- Abdominal gaster yellow basally and apically.

Sceliphron unidentified

(Fig. 4)

- Face covered by dense golden hair; no yellow integumental patch on lower face (as in *S. laetum*).
- Thorax dorsally with no yellow patch medially between wing bases.
- Hind part of thorax with no yellow patches or spots.
- Abdominal gaster yellow basally only, black apically.

Nest characteristics

Sceliphron laetum

Cells cemented together into a large single mass. The outside of completed nests is covered with rough ridges of mud (Fig. 6).

Sceliphron unidentified

Cells cemented together into a large single mass but outside of completed nest not coated with rough ridges (Fig. 8).

Sceliphron formosum

Cells constructed separately (although two or more may be made in close proximity), tapered at blind end and closed with a flat cap at mouth end (Fig. 9).

NB. The mud-nests built by *Sceliphron* wasps are quite similar to some built by wasps in other families, especially the Vespidae (subfamily Eumeninae). However, the cocoons of *Sceliphron* are quite distinctive, being elongate ovoidal, somewhat constricted at one end, papery and dark-brown (Fig. 7). Those of vespids, by contrast, are colourless and are moulded to the inner walls of the cells.



Fig. 1 *Sceliphron laetum*



Fig. 2 *Sceliphron formosum*



Fig. 3 *Sceliphron laetum*



Fig. 4 *Sceliphron* unidentified



Fig. 5 *Sceliphron formosum*



Fig. 6 Completed nest of *S. laetum*



Fig. 7 Cocoon of *S. laetum*



Fig. 8 Vacated nest of unidentified *Sceliphron*



Fig. 9 Two completed cells of *S. formosum*