

# Invasive Ant Threat



INFORMATION SHEET Number 33 • *Tapinoma sessile*

Risk: Medium

## *Tapinoma sessile* (Say)

### Taxonomic Category

Family:	Formicidae
Subfamily:	Dolichoderinae
Tribe:	Dolichoderini
Genus:	<i>Tapinoma</i>
Species:	<i>sessile</i>

**Common name(s):** odorous house ant (Smith 1965)

**Original name:** *Formica sessilis* Say

**Synonyms or changes in combination or taxonomy:** *Bothriomyrmex dimmocki* Wheeler, *Formica gracilis* Buckley, *Formica parva* Buckley, *Tapinoma boreale* Provancher, *Tapinoma boreale* Roger

### General Description

#### Identification

**Size:** monomorphic. Total length 2.4 to 3.5 mm; body soft and flexible.

**Colour:** variable, ranging from more or less uniform brown to uniform black.

**General description:** antennae 12-segmented, without club; base of the antenna touching the posterior border of clypeus. Mandibles each with two apical teeth, followed by a number of smaller teeth or denticles. Clypeus with anterior border margin emarginate medially, with a prominent suberect or erect hair on each side of the emargination, best seen in profile. Promesonotal and mesoepinotal sutures distinct. Propodeum without spines, the upper surface shorter than the rear (sloping) surface. One rudimentary node (petiole) present, which lacks a distinct forward face and is partially or completely concealed (viewed from above) by forward projection of the first segment of the gaster. Gaster with 4 segments on its upper surface. Suberect or erect hairs very sparse on body, absent from thorax. Cloacal orifice ventral, transverse, slit-shaped, not surrounded by a fringe of hairs. Stinger absent, anal glands produce a strong rotten coconut odor.

Source: Smith 1965

Formal description: Creighton 1950

### Behavioural and Biological Characteristics

#### Feeding and foraging

Workers are very active and travel in both wandering patterns and set trails usually in files. When disturbed or attacked, the workers move around erratically emitting an odour from the posterior part of their abdomen similar to rotting coconut (www8). Workers tend and in some cases transport plant lice, scale insects, and mealy bugs (Smith 1965). Also feed on both dead and living insects. In homes, forage primarily for sweet foods (www22). Foragers show low interspecific

aggression and are easily displaced by competing ant species (Scharf et al. 2004). They are active when temperatures are above about 10 °C (Barbani 2003).

### *Colony characteristics*

Large colonies, with up to 10,000 or more workers and many queens (www22; Higgins et al. 2002). Colonies display low intra-specific aggression (Higgins et al. 2002), but this does not extend beyond the limits of a single habitat (Passera 1994) as it does in species like *Linepithema humile*. *T. sessile* form their nests under objects such as stones and logs; they are also found in plant cavities, under bark, in stumps, insect galls, refuse piles, and in bird and mammal nests (Smith 1965). Nests found in the soil are not well defined and lack permanency, relocating about every 25 days (Thompson 1990).

### *Dispersal*

Mating can take place both inside and outside the nest (Smith 1928 cited in Barbani 2003). Colony founding appears to be primarily by budding that occurs after a nuptial flight (Passera 1994). They are rapid colonisers after disturbance events have reduced the abundance of competing species (Scharf et al. 2004). Incipient colonies may be started independently by queens that mate outside the nest (Barbani 2003).

### *Habitats occupied*

*T. sessile* is a widely distributed, very adaptable ant found at altitudes ranging from sea level to 3200 m (Smith 1965). They can be found in a wide variety of habitats, from sandy beaches, pastures, open fields, woodlands and bogs to houses.

## **Global Distribution (See map)**

### *Native to*

Southern Canada, the entire United States, with the exception of the desert areas of the southwest, and into Mexico (Creighton 1950; Smith 1965). Its abundance decreases sharply in the Gulf Coast region but it has been collected in Florida, Alabama, Mississippi and Texas (Creighton 1950).

### *Introduced to*

Reported from Penang, Malaysia (Na & Lee 2001).

### *History of spread*

Currently only one report of its occurrence outside its native range with no details given as to when it arrived.

### *Interception history at NZ border*

There have been no confirmed interceptions of this species. There are a number of unidentified *Tapinoma* specimens in interception records, none of which are from North America, but one is from Malaysia and eight from Singapore (which could have originated elsewhere).

## **Justification for Inclusion as a Threat**

An important native house-infesting ant in temperate North America, capable of invading houses from outdoors, or

nesting inside (Smith 1965). The ant shows many of the attributes of invasive species (polygyny, supercolonies, highly mobile colonies (Higgins et al. 2002)) and is a first arrival after disturbance events (Scharf et al. 2004). They have been spread outside their native range at least once (to Penang, Malaysia – Na & Lee 2001). The species occupies a wide range of habitats and is spread across a wide range of climates (Smith 1965). They do not sting but produce a disagreeable odour. They tend honeydew-producing insects and are transmitters of plant disease (Smith 1965).

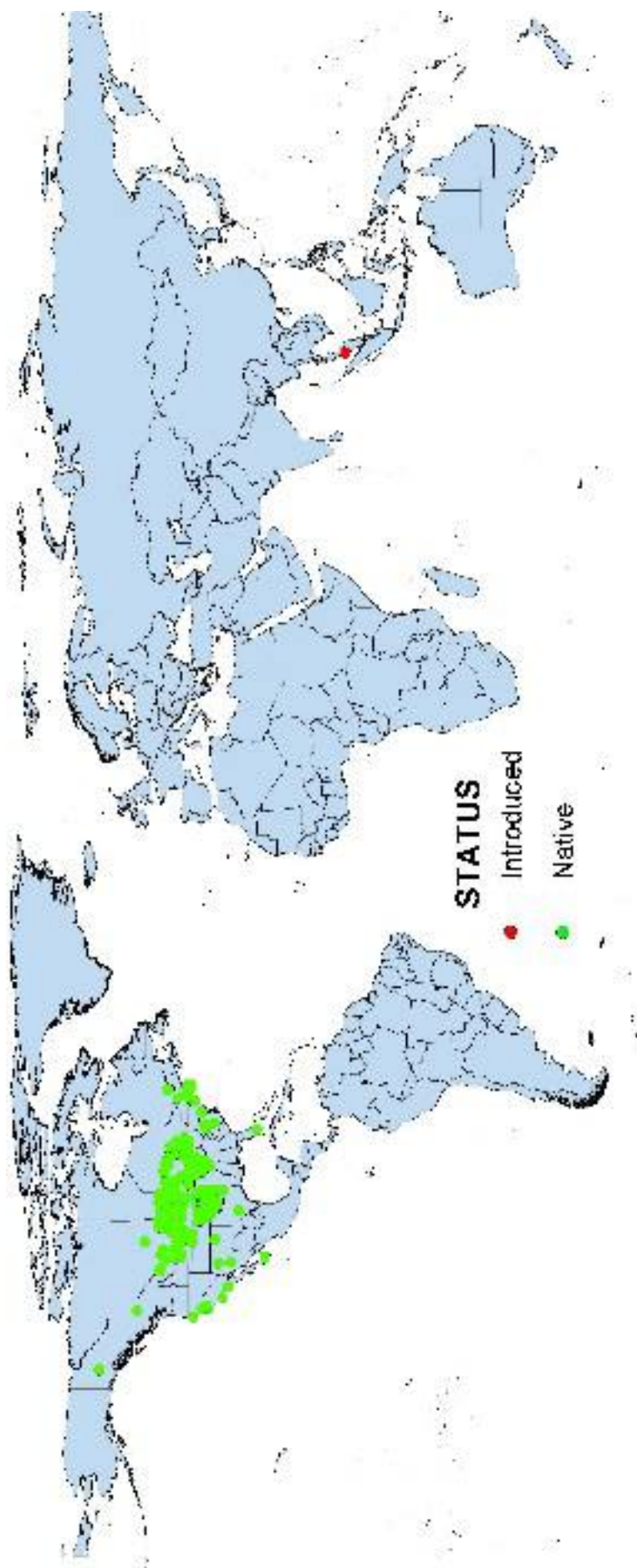
#### *Mitigating factors*

Not in the Southern Hemisphere. No confirmed interceptions.

#### **Control Technologies**

Formulations containing either boric acid or imidacloprid at low concentrations show some effectiveness (Higgins et al. 2002), although these were not tested with the aim of eradication. Aromatic cedar mulch can exclude foragers (Meissner & Silverman 2001).

*Compiled by Richard Harris & Jo Berry*



Global distribution of *Tapinoma sessile* (Say)