

Invasive Ant Threat



INFORMATION SHEET Number 38 • *Tetramorium tonganum*

Risk: Medium

Tetramorium tonganum Mayr

Taxonomic Category

Family:	Formicidae
Subfamily:	Myrmicinae
Tribe:	Tetramoriini
Genus:	<i>Tetramorium</i>
Species:	<i>tonganum</i>

Common name(s): nanyou-shiwa-ari (Japan)

Original name: *Tetramorium tonganum* Mayr

Synonyms or changes in combination or taxonomy: *Tetramorium magitae* Forel

General Description (worker)

Identification

Size: total length 2.6–3.1 mm.

Colour: varying from light yellowish brown to mid-brown, often with gaster darker than rest of body.

Surface sculpture: dorsal head and alitrunk mostly sculptured; spaces between rugulose sculpture on entire dorsum of head smooth or with superficial sculpture, so the surface appears mostly or entirely shiny. Petiole and postpetiole predominantly smooth; gaster smooth.

General description: antennae 12-segmented, with a 3-segmented club; scapes relatively long. Eyes moderate in size. Mandibles broad, triangular, striate; with 2 or 3 enlarged apical teeth followed by a row of smaller ones. Frontal carinae not strongly developed but more conspicuous than any other cephalic sculpture; extending back well beyond level of eyes, approaching occiput. Clypeus with a medial longitudinal carina and other carinae; anterior margin without median notch. Area of the clypeus immediately below antennal sockets raised into a sharp-edged ridge, which forms the lower section of a pit around the base of the antennae. Metanotal groove not impressed. Propodeum dorsally with 2 short, upturned spines, additionally a pair of flanges (metapleural lobes) present near the insertion of the petiole. Two nodes (petiole and postpetiole) present; petiole with an elongate slope (peduncle) preceding the rounded node. All dorsal surfaces with numerous fine hairs of variable lengths and only scapes and hind tibiae without erect setae. Sting present, tip with a triangular extension projecting upwards from the shaft (visible only when sting is extended).

Sources: Wilson & Taylor 1967

Formal description and key: Bolton 1977

Behavioural and Biological Characteristics

Very little information was found about the biology of this species.

Feeding and foraging

This ant is probably a general scavenger and predator. It is not numerically dominant in the Society Islands and appears to be a minor component of the ant fauna (Morrison 1996a).

Colony characteristics

Nests have been found in rotten wood in Fiji (Mann 1921).

Dispersal

No information found.

Habitats occupied

T. tonganum is found on forest edges and disturbed rainforest in leaf litter, moss, on shrub and vine foliage, on tree trunks under the bark and under epiphytes, and on rotting logs (Wilson & Taylor 1967). It is commonly found on Pacific Islands in lowland mesic conditions, and in Hawaii is only found below 900 m a.s.l (Wilson & Taylor 1967; Reimer 1994).

Global distribution (see map)

Native to

The Pacific extending from Ogasawara Island, Japan (northern limit) to New Guinea (southern limit) (Bolton 1977). Java and Sumba represent the western limits (Bolton 1977).

Introduced to

Hawaii (Wilson & Taylor 1967; Reimer 1994), Niue (Collingwood 2001) and probably the Society Islands, and other eastern Pacific Islands, originally not thought to have any ants (Morrison 1996). It has also been recorded in greenhouses in the UK (Bolton 1977). McGlynn (1999) lists Brazil, but does not cite the source reference for this record, and no verification of this record was found.

History of spread

The first report of its presence in Hawaii was 1927 (Swezey 1927). First collected in the Society Islands of Moorea and Huahine in the 1930s (Morrison 1996b).

Interception history at NZ border

There have been 8 recorded interceptions of *T. tonganum* at the border, all in fresh produce originating from Pacific islands, including 2 live nests in coconuts from Fiji intercepted in Auckland. There have also been 6 interceptions (including 1 queen) of unidentified *Tetramorium* species from the Pacific, some of which could be *T. tonganum*.

Justification for Inclusion as a Threat

T. tonganum is a widespread Pacific species. It has established outside its native range and may be able to establish in greenhouses in temperate locations (Bolton 1977). Interceptions at the New Zealand border include 2 live nests. Its arrival in New Zealand could go unnoticed due to the presence of other *Tetramorium* species.

Mitigating factors

Although it may establish temporarily in glasshouses in temperate climates (Bolton 1977) there is low climate similarity between the known range outside of buildings and New Zealand. It appears to be a minor constituent of the Hawaiian ant community (Gruner 2000). No research was found that specifically relates to this ant indicating it is probably a minor component of communities it has invaded. It is considered unlikely this species would have impacts over and above the two exotic *Tetramorium* already established in New Zealand (*T. grassii* & *T. bicarinatum*).

Control Technologies

Nothing is reported on control of this species and the lack of information suggests it is rarely if ever considered a pest.

Compiled by Margaret Stanley, Richard Harris & Jo Berry

