

Invasive Ant Threat



INFORMATION SHEET Number 31 • *Strumigenys rogeri*

Risk: Medium

Strumigenys rogeri Emery

Taxonomic Category

Family:	Formicidae
Subfamily:	Myrmicinae
Tribe:	Dacetini
Genus:	<i>Strumigenys</i>
Species:	<i>rogeri</i>

Common name(s): none known

Original name: *Strumigenys rogeri* Emery

Synonyms or changes in combination or taxonomy: *Strumigenys incisa* Godfrey, *Strumigenys sulfurea* Santschi

General Description (worker)

Identification:

Size: total length 2.3–2.8 mm.

Colour: body colour dull yellow to light medium brown.

Surface sculpture: dorsum of head and most of dorsum of alitrunk sculptured (reticulate-punctate), dorsum of petiole weakly sculptured and postpetiole mainly smooth.

General description: antennae 6-segmented; scapes long, segments 3 and 4 very short, last segment long. Eye moderate in size; bordered anteriorly by a deep notch, extending on to ventral surface of head, clearly visible in face view. Top of head bilobate. Mandibles a pair of narrow linear blades, armed apically with a fork of 2 simple teeth; additionally two preapical teeth situated in the apical third of the length of each mandible. Metanotal groove not impressed. Propodeal spines triangular, partly incorporated below into posterolateral lamellae. Two nodes (petiole and postpetiole) present. Sides of the petiole, postpetiole and lower part of the gaster also with masses of sponge-like cuticle. Scapes, top of head, upper antennal scrobe and clypeal margins with modified setae (spatulate or spoon-shaped); dorsal surfaces of petiole, postpetiole and gaster with erect setae that are weakly swollen apically; remaining setae (erect and appressed) unmodified.

Sources: www38; Bolton (1983)

Formal description: Bolton (1983)

Behavioural and Biological Characteristics

Feeding and foraging:

Workers preferentially prey on Collembola (Entomobryoid families) and Campodeidae (order Dipultra), but also take a

variety of other small arthropods (Brown 1954). Foraging is largely within the litter layer (hypogaecic) (www41). These slow moving ants are almost never seen in the open (Deyrup & Trager 1984) and specimens are mostly collected by various litter extraction methods. Members of the *Strumigenys* genus have long, linear mandibles with a few large teeth at the apex (www13). While waiting for prey, the mandibles are opened at least 170°. When the prey encounters the specialized trigger hairs of the ant's mouthparts, the long mandibles snap shut with explosive force. The initial strike itself usually kills the prey.

Colony characteristics

Colonies are small (www13) and probably monogyne. Nests are in and under dead wood on the ground (www41), but they can reach high population numbers in some areas in Florida and the native ants of similar habits, *S. louisianae* and 4 species of *Pyramica*, have not been seen at sites where *S. rogeri* is present in abundance (Deyrup & Trager 1984).

Dispersal

Dispersal is likely to be by mated queens and probably without a highly synchronous emergence period (Kaspari et al. 2001).

Habitats occupied

Inhabit wet areas in Florida (Deyrup & Trager 1984; Clouse 1999) and absent from surrounding drier habitat with other *Strumigenys* species present (Deyrup & Trager 1984). Widespread in semi-deciduous forest in Ghana and rainforest in Madagascar (www38). Occurs in leaf litter deep within mature rainforest in Costa Rica (www41).

Global Distribution (See map)

Native to

Africa (Bolton 1983).

Introduced to

This species has become widely dispersed. It occurs in Hawaii (Reimer 1994), is widespread in the Pacific (e.g., Wilson & Taylor 1967; Morrison 1996a9; Wetterer 2002), is recorded from greenhouses in England (Brown 1962) and Scotland (www41), present in Florida (Deyrup et al. 2000), and many islands in the Caribbean (www41; www38) and there are several records from mainland Neotropics (www41).

History of spread

This species has spread as a result of commerce to many parts of the globe (www41), probably largely been spread through transport of soil and potted plants. It appears to be one of the few exotics that can invade mature forest (www41), rather than being restricted to open and disturbed habitats.

Interception history at NZ border

There have been six interceptions of this species at the New Zealand border, all in fresh produce (taro and kape) from Fiji and Samoa.

Justification for Inclusion as a Threat

An African species that has spread widely outside its native range to include temperate locations. Intercepted at the New Zealand border (6 times) in fresh Pacific produce. A specialised predator of Collembola that may impact on competitors and prey in native systems (Deyrup et al. 2000). Likely to establish in wet forest that few other adventive ants inhabit. As this species is small and cryptic, any incursion in New Zealand would be difficult to detect and unlikely to be eradicated.

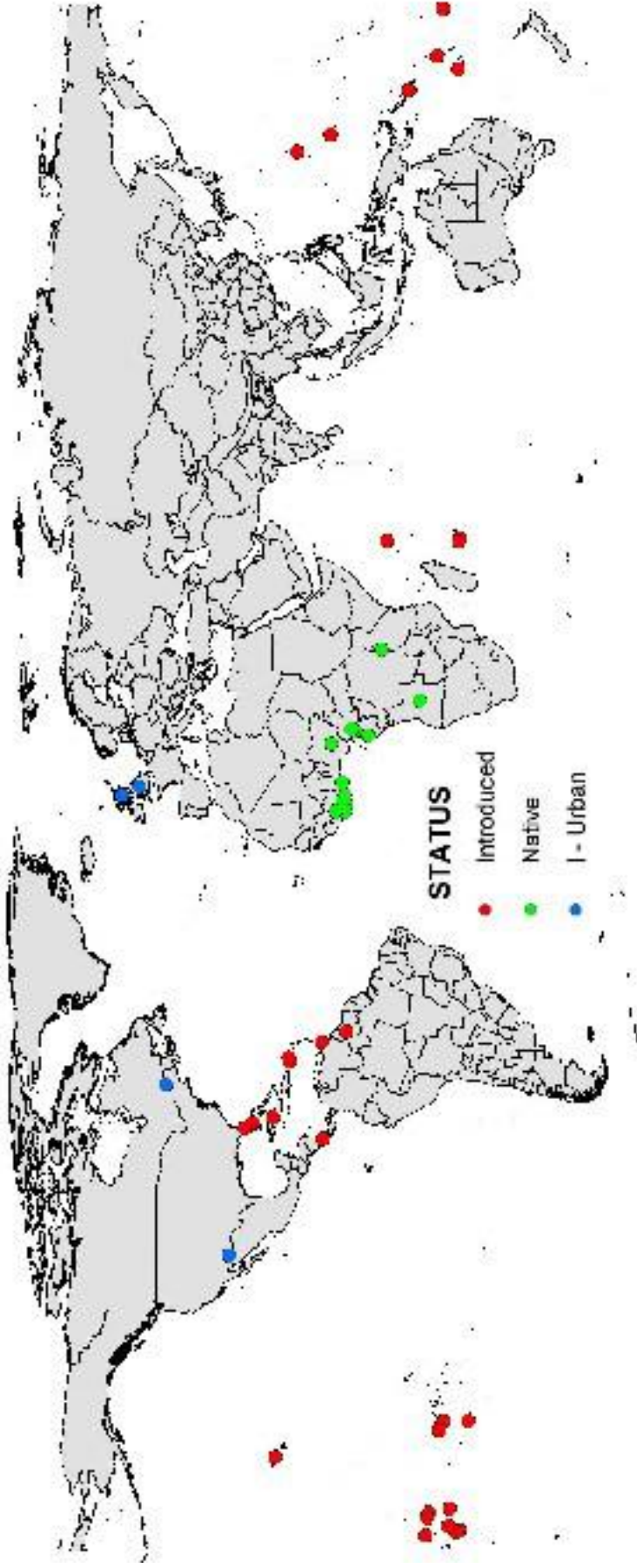
Mitigating factors

Areas of suitable climate may be limited in New Zealand outside urban areas. Not considered a pest in Florida (Deyrup et al. 2000). Would join the already established *S. perplexa* in New Zealand (a species widespread but in low densities wherever sampled), likely to occupy similar habits, and have minimal impact.

Control Technologies

None reported, as this species has no economic importance (Deyrup & Trager 1984). Likely to be very difficult to eradicate if found in New Zealand due to its cryptic behaviour, small colony size, winged dispersals, and occurrence in forested areas.

Compiled by Richard Harris & Jo Berry



Global distribution of *Strumigenys rogeri* Emery