

Pictorial Key of the Ants of Hawaii Based on the Worker Forms¹

ELLIS W. HUDDLESTON², ALBERT A. LAPLANTE³, SAM S. FLUKER⁴

UNIVERSITY OF HAWAII

HONOLULU, HAWAII

This pictorial key was designed to aid in the identification of the 42 species of ants reported from Hawaii. The first key to the ants of Hawaii was prepared by Gulick in 1913, at which time 23 species were known. In 1934, Phillips, in his work on the ants found in Hawaiian pineapple fields, presented a key to 28 species. Wilson and Taylor (1967) in "Ants of Polynesia" published a key in which 36 of the 42 species presently known from Hawaii were included. The many significant changes in synonymy and the new species found in the past year have made it desirable to prepare a current key restricted to the species known from Hawaii.

The ideas and concepts used in this key were taken primarily from the excellent work, "Ants of Polynesia", by Wilson and Taylor (1967). The majority of the illustrations were redrawn or traced from this publication. Most of the remaining pictures were redrawn from Smith (1947).

The following terms particular to ant taxonomy are defined from Torre-Bueno (1962) to expedite the use of this key.

Alitrunk: Posterior part of thorax, including the first abdominal segment.

Carina: An elevated ridge or keel, not necessarily high or acute.

Dimorphic: Occurring in 2 distinct forms.

Mesometanotal groove: A small groove that extends between the upper surface of the 2nd and 3rd thoracic segments.

Mesepisternum: The sternum of the mesothorax.

Monomorphic: Occurring in 1 distinct form.

Node: A knot or knob.

Occipital corner: In full face view, the upper margin of the head that is the greatest distance from the antennal insertion.

Pedicel: The 1 or 2 segments of the base of the abdomen which are much reduced.

Peduncle: A stalk or petiole.

Petiole: The 1st segment of a 2-segmented pedicel in ants.

Post petiole: The 2nd segment of the pedicel when it has 2 segments.

Preapical teeth: Teeth that are before the apex.

Propodeal spines: Spines on the 1st abdominal segment when it forms a part of the alitrunk.

Punctate: Set with impressed points or punctures.

Reticulate: Covered with a network of lines; meshed; netted.

Rugose: Wrinkled.

Scapae: The long basal joint in geniculate antennae.

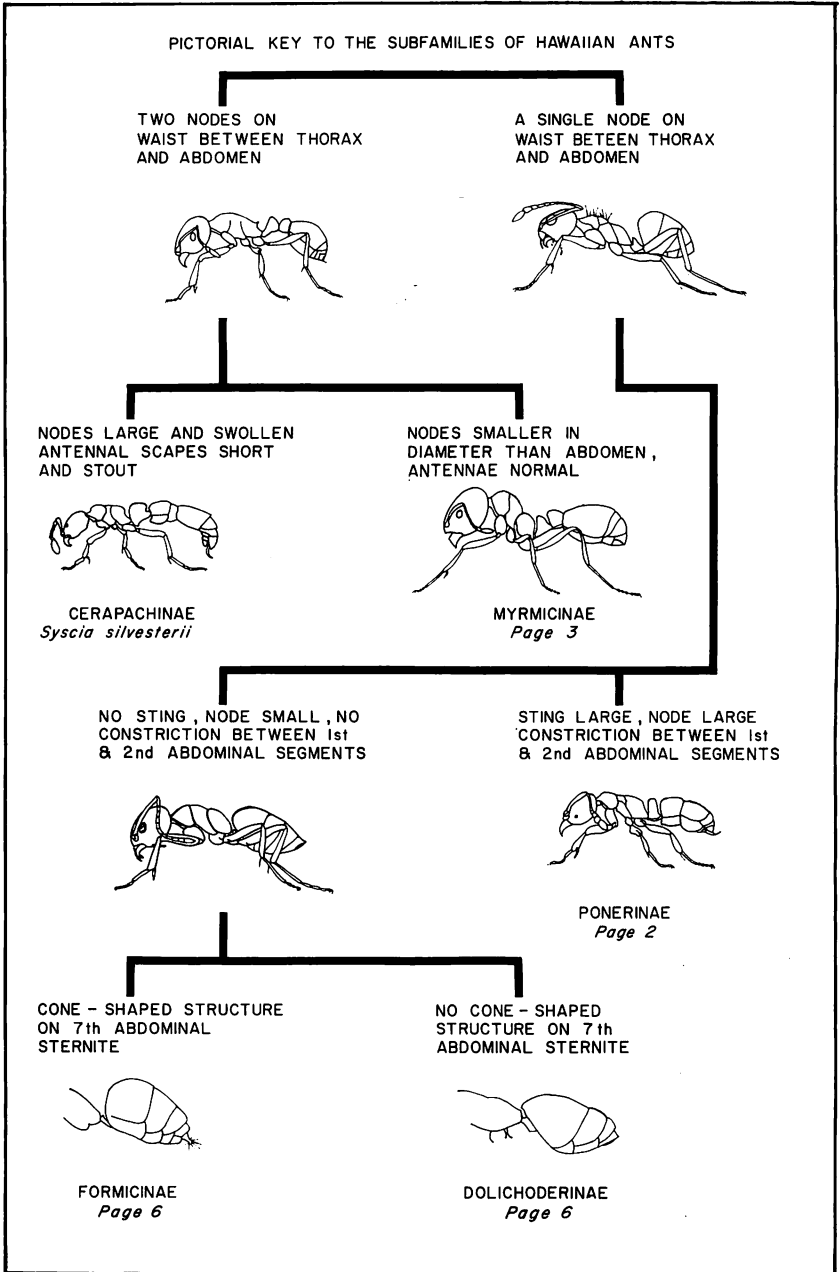
Shagreened: Covered with a closely-set roughness, like the rough-surfaced horse leather

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²Associate Professor, Department of Entomology, University of Hawaii, Present Address: Department of Entomology, Texas Technological College, Lubbock, Texas.

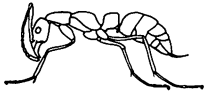
³Extension Entomologist, University of Hawaii.

⁴Research Assistant, Department of Entomology, University of Hawaii.



PICTORIAL KEY TO THE GENERA AND SPECIES OF THE SUBFAMILY PONERINAE

MANDIBLES LONG, SLENDER, CURVED. LARGE BLACK SPECIES (7mm)



Leptogenys falcigera

MANDIBLES SHORT, SLENDER CURVED. SMALL YELLOWISH SPECIES (2mm)



Amblyopone zwaluwenburgi

MANDIBLES TRIANGULAR YELLOW TO BLACK SPECIES (1.5-3mm)



EYES COMPLETELY ABSENT



EYES PRESENT, MAY BE ONLY A SINGLE FACET JUST ABOVE MANDIBLE



MANDIBLES WITH COMB-LIKE PREAPICAL TEETH. NO FENESTRA OR DENTICES



Hypoponera zwaluwenburgi

PREAPICAL TEETH NOT COMB-LIKE. SUBPETIOLAR FENESTRA AND DENTICES



Ponera swezeyi

EYE WITH SEVERAL FACETS SCAPES DO NOT REACH TOP OF HEAD (2.5 mm)



Hypoponera punctatissima

EYE WITH SEVERAL FACETS ANTENNAL SCAPES REACH TOP OF HEAD (2.5 mm)

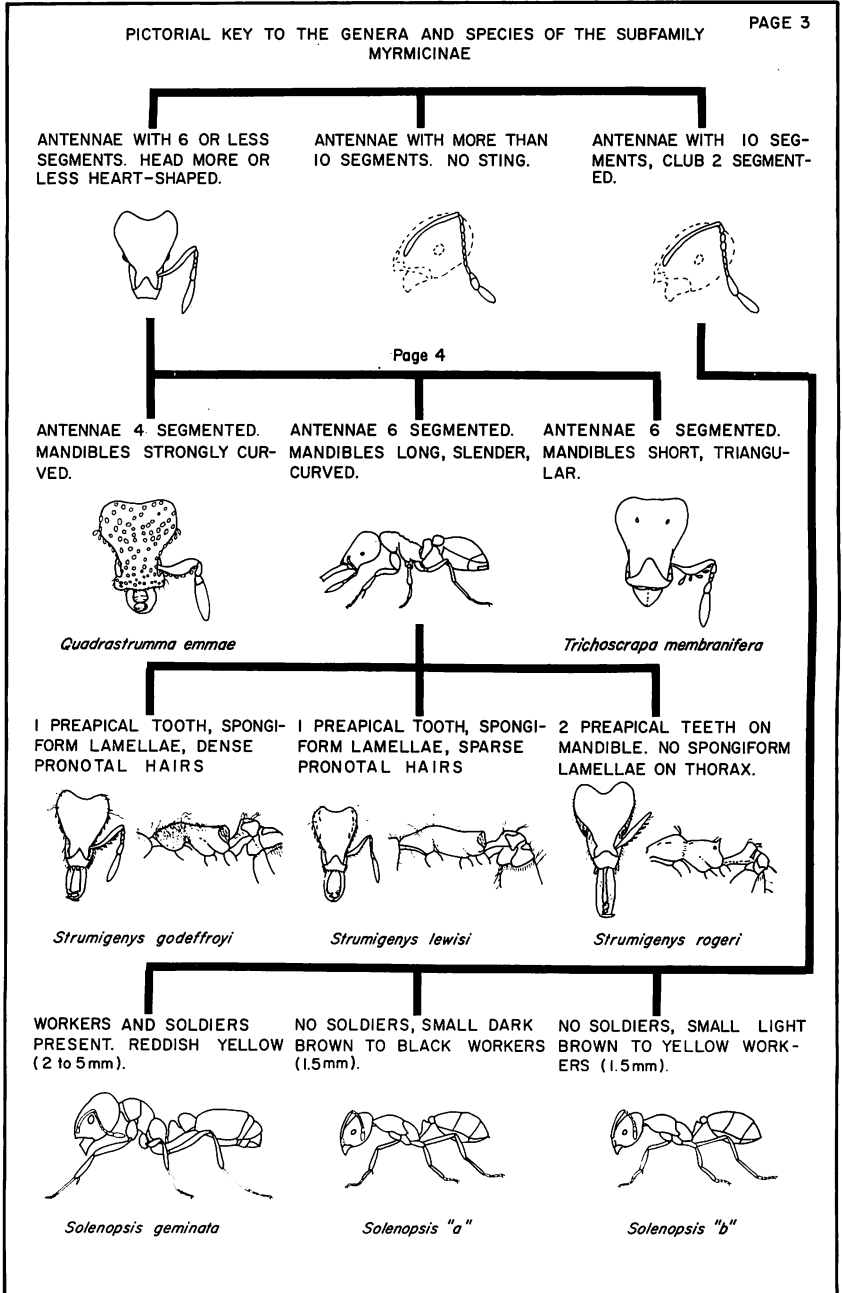


Hypoponera opaciceps

EYE WITH SINGLE FACET RAISED CARINA AROUND MESEPISTERNUM (2mm)



Hypoponera sinensis



PROPODEAL SPINES, HEAD
RETICULATED. VERTICAL
RIDGES BETWEEN ANTENNAE
NO SOLDIERS PRESENT



NO PROPODEAL SPINES,
HEAD PUNCTATE OR SHINY



PROPODEAL SPINES. HEAD
SHINY OR PUNCTATE,
RETICULATE-STRIATE ONLY
ON BIG-HEADED SOLDIERS



Genus *Monomorium* page 5

ANTERIOR PEDUNCLE THICK
THORAX STRIATE, SHORT
SPINES, HW .65mm.



Tetramorium simillimum

ANTERIOR PEDUNCLE THIN
THORAX RETICULATE, SHORT
SPINES, HW .65mm.



Tetramorium tonganum

ANTERIOR PEDUNCLE THICK
THORAX RETICULATE, LONG
SPINES, HW .7mm.



Tetramorium guineense

NO SOLDIERS, HEAD DULL
AND PUNCTATE. (1.5-2.5mm.)

BIG-HEADED SOLDIERS,
HEAD OF WORKERS
SMOOTH AND SHINING
Genus *Pheidole* Page 5

MESOMETANOTAL GROOVE
DISTINCT, ESPECIALLY
IN SIDE VIEW



MESOMETANOTAL GROOVE
ABSENT OR VERY WEAK
DARK BROWN OR BLACK (1.5 mm.)



Cardiocondyla nuda

PROPODEAL SPINES SHORT
DARK BROWN TO BLACK
(2-2.5 mm.)



Cardiocondyla "a"

NODE SUB-GLOBULAR, SPINES
LONG. MESONOTUM DECLINING
ABRUPTLY AT GROOVE



Cardiocondyla wroughtoni

NODE COMPRESSED SPINES
SHORT. MESONOTUM SLOPING
GRADUALLY TO GROOVE



Cardiocondyla emeryi

PICTORIAL KEY TO THE GENERA AND SPECIES OF THE SUBFAMILIES
FORMICINAE AND DOLICHODERINAE

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ANTENNAE 11 SEGMENTED

ANTENNAE 9 SEGMENTED

ANTENNAE 12 SEGMENTED



Brachymyrmex obscurior

SMALL, ROBUST, YELLOWISH
(1.5 mm)

LARGE, ELONGATE, REDDISH
YELLOW (4 mm)



Anoplolepis longipes

SCAPE EXCEEDS OCCIPITAL
CORNER BY THE LENGTH OF
THE NEXT TWO SEGMENTS

SCAPE EXCEEDS OCCIPITAL
CORNER BY LESS THAN THE
LENGTH OF THE NEXT SEGMENT



Plagiolepis alluaudi

Plagiolepis exiga

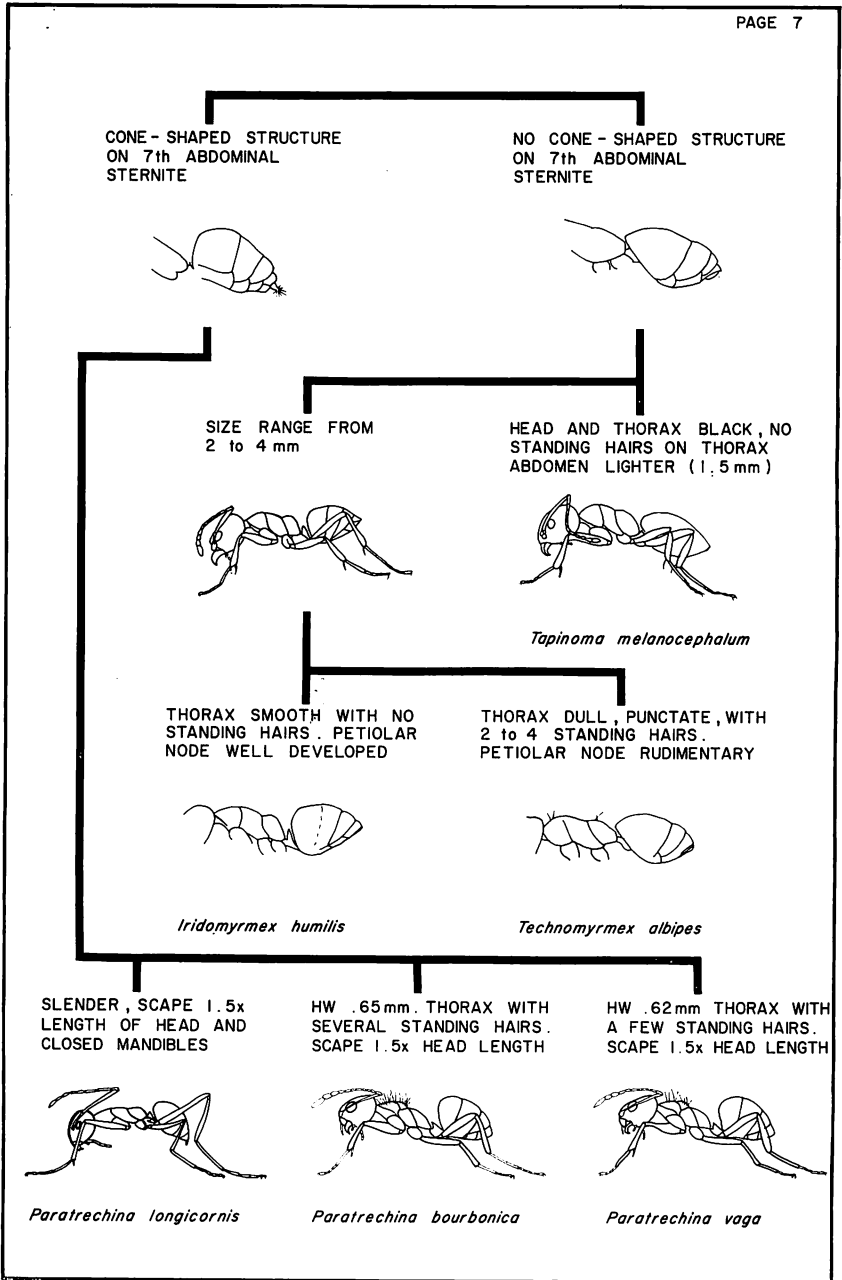
LARGE, YELLOWISH WORKERS
AND SOLDIERS (7 mm)

MEDIUM TO SMALL, ALL
WORKERS THE SAME SIZE
(1.5-3 mm)



Camponotus variegatus

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or shark leather.

Spongiform lamellae: A sponge-like growth, especially on the posterior face of the prododeum.

Subpetiolar denticles: Very short, posteriorly directed projections on the posteroventral part of the subpetiolar process.

Subpetiolar fenestra: A small shiny area on the anteroventral part of the subpetiolar process.

Subpetiolar process: The compressed ventral area of the petiole.

LITERATURE CITED

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