Identification key of the ant species of

Aruba, Bonaire and Curaçao

worker caste

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It is intended that this key will be updated regularly.

version 1.0, 23 X 2020

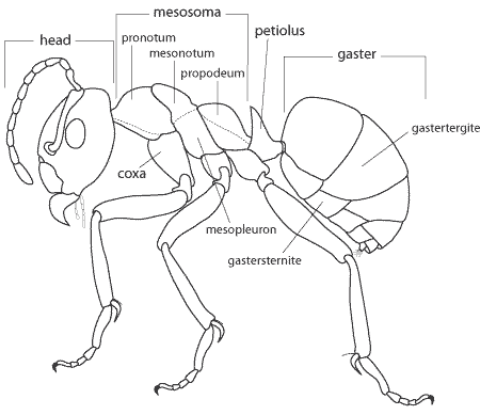
The ants mentioned in this key are the result of the identification of samples collected between 1930 and 1970 by H.J. MacGillavry, P. Wagenaar Hummelinck and R.H. Cobben (all in the collection of Naturalis Biodiversity Center, Leiden, Netherland), by the author in 2020 on Aruba, supplemented with a few literature references.

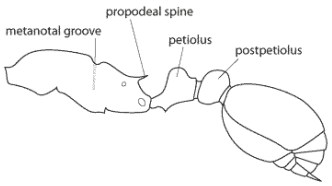
All identifications (except data from literature) are done by the author.

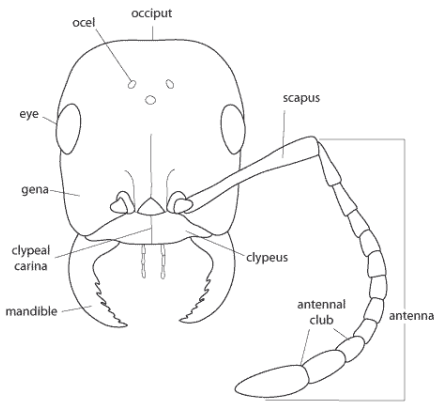
More species can be expected on all of these three islands.

In processing the material I have received a lot of support from Frederique Bakker (Naturalis) for which my thanks.
This research would not have been possible without the extensive information on www.antweb.org and www.antwiki.org.
All (parts of) images are from antweb.org.
Finally, thanks to Jadranka Njegovan for the drawings with terms used in the key.

Additions and comments are very welcome.

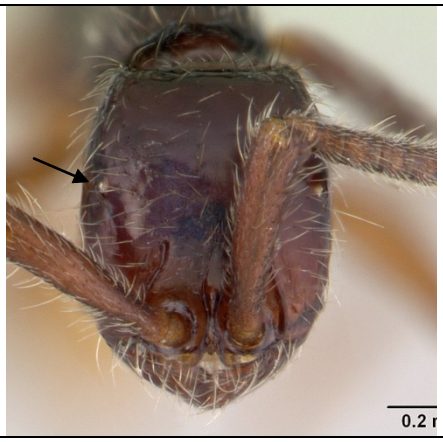


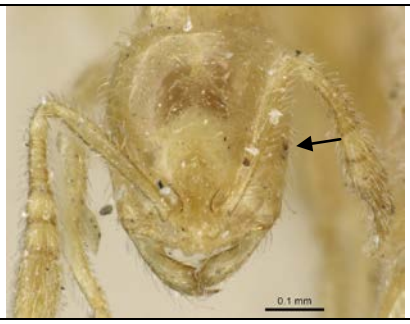




CW = maximum head wide
CL = head lenght
EYL = maximum eye length
EYW= maximum eye wide
REL = EYL/head length
SL = length of scapus

1a	Mandibles slender, elongated, without teeth.		*Leptogenys pubiceps*
1b	Other combination of characteristics.		➔
2a	Between gaster and mesosoma two clearly separated nodules (petiolus and postpetiolus).		➔ 2
2b	Between gaster and mesosoma one nodule (petiolus), or node is invisible.		➔ 21
3a	Relatively long, slender ants, with conspicuous large eyes; ocelli present.		*Pseudomyrmex* → 100
3b	Other combination of characteristics.		➔ 3
4a	Postpetiole attached to dorsal surface of first gastertergite, gaster in dorsal view heart-shaped.		*Crematogaster* → 110
4b	Postpetiole attached to frontal side of gaster,		➔ 4
5a	Dorsum of mesosoma strongly flattened; in frontal view: head looks like a shield.		*Cephalotus pellans*
5b	Head not shield-like and mesosoma not flattened.		➔ 5

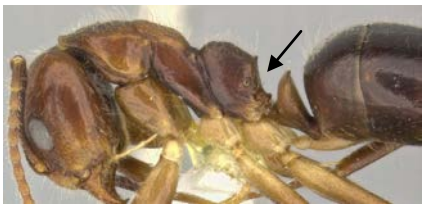
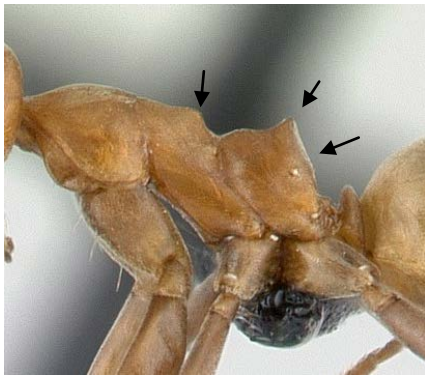
6a	Last gastertergite flat with short spines and/or teeth; eyes very small; scapus robust.		*Neivamyrmex* → 250
6b	Other combination of characteristics.		→ 6
7a	Posterior side of the propodeum rounded, without spines of teeth.		→ 7
7b	Posterior side of the propodeum with spines or teeth or at most angular.		→ 13
8a	Antennal club 2-segmented.		→ 8
8b	Antennal club 3-segmented.		→ 11
9a	Postpetiolus in doral view extraordinarily broad.		*Solenopsis globularia* complex → 120
9b	Postpetiolus in doral view not extraordinarly broad.		→ 9
10a	Each eye consists at most 5 ommatidia; antennal segments between scapus and club short (wider than long), < 2,5 mm.		→ 10
10b	Each eye consists at least 25 ommatidia; antennal segments between scapus and club at least as long as wide; big difference in size, > 2,5 mm.		*Solenopsis* 'fire ants' → 130
11a	Head with a rough surface structure.		*Carebara* sp.
11b	Head smooth.		*Solenopsis* 'thief ants' → 140
12a	Eyes conspicuous, distinctly with more than twenty ommatidia.		→ 12

12b	Eyes minute and point-like, consisting of only one or two ommatidia.		*Syllophopsis* sp.
13a	In dorsal view: propodeum not costulate ('striate'), monomorph.		*Monomorium* → 150
13b	In dorsal view: propodeum transversely costulate ('striate'), polymorph.		*Trichomyrmex destructor*
14a	Postpetiolus (in dorsal view) subcircular, much wider than the petiole; approximately 2 mm.		*Cardiocondyla* → 160
14b	Postpetiolus in doral view not extraordinarly wide.		→ 14
15a	4- to 6-segmented antennae, 2-segmented antennal club; head without jaws triangular in shape, which means that the head above the eyes is much wider than at the mandibular joint; in frontal view the eyes are barely or not visible; setae (partly) spatulate; approximately 2 mm.		*Strumigenys* → 170
15b	Other combination of characteristics.		→ 15
16a	Mesosoma with several spines and or knobs.		'fungus-growing ants' → 34
16b	Only 2 spines or teeth on the backside of the propodeum.		→ 16
17a	Antennal club 2-segmented.		→ 17
17b	Antennal club 3-segmented.		→ 18
18a	Propodeal spines long; clear antennal scrobes; approximately 2 mm.		*Wasmannia auropunctata* not (yet) observed on Aruba

18b	Antennal club 2-segmented; propodeal spines short; eyes very small.		*Carebara* sp.
19a	Postpetiole, in dorsal view, subtriangular, with a large impression at posterior margin, forming two distinct lobes, heart-shaped and dorsoventrally flattened.		➔ 34
19b	Postpetiole, in dorsal view, not subtriangular, without impression, not heart-shaped.		➔ 19
20a	Eyes small, < 15 ommatidia.		*Rogeria curvipubens*
20b	Eyes well developed (> 15 ommatidia).		➔ 20
21a	Propodeum notably depressed below level of promesonotum (= pronotum + mesonotum); worker caste strongly dimorphic.	 	*Pheidole* → 180

21b	Propodeum not depressed; between the mandibles and the antennal sockets a rising ridge; monomorphic.		*Tetramorium* → 240
22a	Mandibles long and straight; petiolus with 1 or 2 teeth or spines.		→ 22
22b	Mandibles not long and straight.		→ 23
23a	Petiolus with a tooth on each lateral corner; approximately 4 mm.		*Anochetes* not (yet) observed on the ABC islands
23b	Petiolus has one prominent vertical spine. > 9 mm.		*Odontomachus bauri*
24a	In dorsal view is petiolus not visible; tip of gaster (apex) without a circular opening; mesosoma without errected setae.		*Tapinoma melanocephalum* species complex → 200
24b	In dorsal view is petiole visible.		→ 24
25a	The gaster has a slight but distinct impression between the first and second gaster segments.		→ 25
25b	Gaster without impressions.		→ 28

26a	Very small eyes, close to the jaws; 2-3 mm.		*Hypoponera*
26b	Developed eyes, in the middle or upper part of the head; > 3 mm.		➔ 26
27a	Head, mesosoma and gaster with pits (foveae), without striae; without erect setae. < 1 cm.		*Platythyrea punctata*
27b	Other combination of characteristics; > 1 cm.		*Ectatomma ruidum*
28a	Small ants with 9-segmented antenna; in dorsal view is the petiolus not visible; 1.5-2.5 mm.		*Brachymyrmex* → 210
28b	11- to 12-segmented antenna; > 2.5 mm.		➔ 29
29a	Position of the eyes largely on or below the center of the head.	 	➔ 30
29b	Eyes in the top half of the head; > 3 mm.		*Camponotus* → 220
30a	Rear face of propodeum flat.		➔ 31
30b	Rear face of propodeum rounded.		➔ 32

31a	Head and mesosoma sculptured, with shallow punctures. 		*Dolichoderus diversus*
31b	Angle of propodeum with a single medial dorsal tooth. 		*Dorymyrmex biconis*
32a	Scapus shorter.		*Azteca delpini*
32b	Scapus long.		➔ 33

33a	Scapus extra long, without erected pubescence. 		*Paratrechina longicornis*
33b	Scapus long with erected pubescence. 		*Nylanderia* → 230
34a	Mesosoma with several spines and or knobs.		→ 35
34b	Mesosoma without marked spines or tubercles. 		*Kalathomyrmex emeryi*

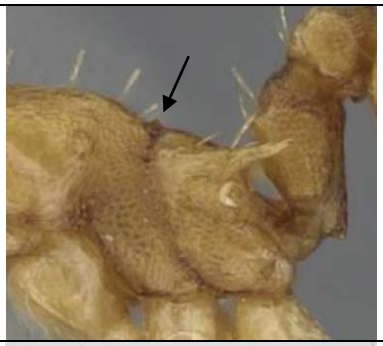
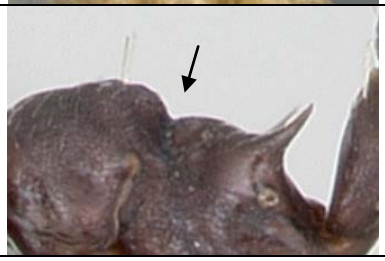
35a	Gaster without spines, teeth or tubercles.		➔ 36
35b	Gaster with spines or tubercles; antennal scrobe indistinct.		➔ 37
36a	Mesosoma with tubercles; erect setae absent; monomorphic; < 3.5 mm.		*Cyphomyrmex minutus*
36b	Mesosoma with prominent spines; poly/dimorphic.		*Atta cephalotus*
37a	Mesosomal spines short.		*Paratrachymyrmex bugnioni*
37b	Mesosomal spines longer; the middle spines of the three pairs on the mesosoma are the same length as the front spines, with the base of the middle spines much thicker than that of the front spines.		*Acromyrmex santschii*

Pseudomyrmex

100a	Head and mesosoma concolorous; head elongated.		➔ 101
100b	Head and mesosoma bi-colored; head more or less round.		*P. termitarius*
101a	Petiolus longer than high; with at most a few scattered setae on the frontal and ventral side of the head, mesosoma and gaster.		➔ 102
101b	Petiolus about as high as long; many setae on the mesosoma.		➔ 103
102a	Height of petiolus / lenght of petiolus = > 0,6		*P. elongatulus*
102b	Height of petiolus / lenght of petiolus = < 0,5		*P. flavidulus*

103a	Head in full face view with short setae.		➔ 104
103b	Head in full face view (apparently) without setae.		*P. pallens*
104a	Mesosoma covered with relatively long setae; > 4mm.		*P. curacaensis*
104b	Mesosoma with short setae; darkly pigmented. < 4 mm.		*P. caecilae*

Crematogaster

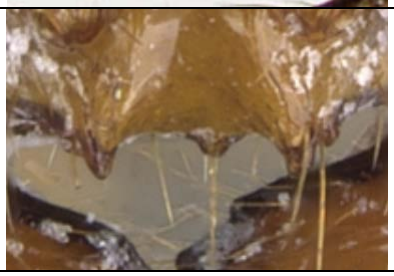
110a	In dorsal view: the large propodal spines diverge widely; pronotum with very spacious reticulate structure.		***C. curvispinosa*** not (yet) observed on the ABC islands
110b	In dorsal view: the propodeal spines run more or less in the same line as those of the propodeum.		➔ 111
111a	Metanotal groove weak.		*C. steinheili*
111b	Marked metanotal groove.		➔ 112
112a	Postpetiolus not bilobed.		*C. crinosa*
112b	Postpetiolus bilobed.		*C. distans*

Solenopsis globularia species complex

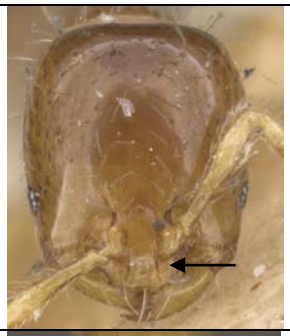
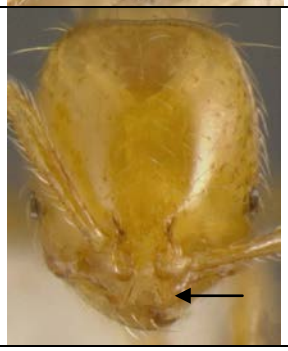
The only species that the author encountered in numerous places on Aruba corresponds to the description of *S. steinheili* from Forel (1885). This taxon is up to now considered as synonymous with *S. globularia*.

120a	Concolorous darkbrown – brownblack; 12 - 25 ommatidia/eye.	*S. desecheoensis*
120b	Head and mesosoma yellowish.	➔ 121
121a	First gastertergite and -sternite at least for 70 % brown to 100% blackbrown; 12-16 ommatidia/eye; CW 0.35-0.45 mm.	*S.* cf *steinheili*
121b	Gaster at most slightly more pigmented than mesosoma and head.	➔ 122
122a	12-15 ommatidia/eye; CW 0.42 mm.	*S. lucayensis*
122b	15-25 ommatidia/eye; CW 0.45-0.52 mm.	*S. globularia*

Solenopsis (fire ants)

130a	Major worker: clypeus, in full-face view, lacking median tooth.		*S. geminata*
130b	Major worker: clypeus, in full-face view, with conspicuous median tooth.		*S. invicta*

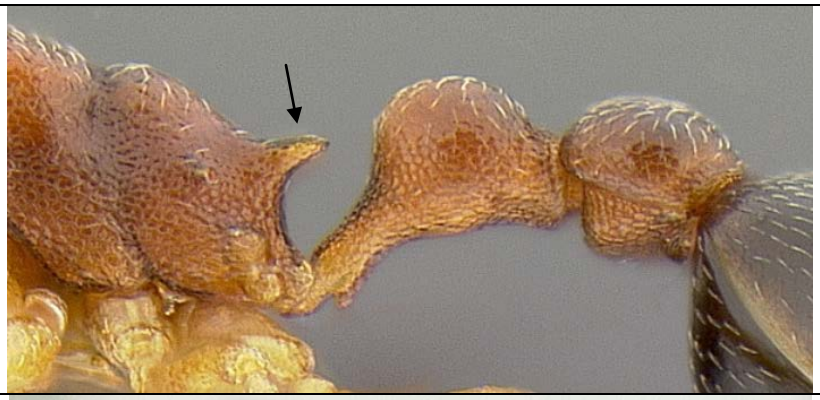
Solenopsis (thief ants)

140a	With extralateral teeth on either side of the clypeal carina.		*S. pollux*
140b	Without extralateral teeth on either side of the clypeal carina.		➔ 141
141a	1-3 ommatidia/eye; in lateral view: petiole wide.		*S. pygmaea*
141b	3-5 ommatidia/eye.		➔ 142
142a	SL/HL < 60; in lateral view: petiole wide; clypeal carina more parallel.	 	*S. azteca*
142b	SL/HL > 60; in lateral view: petiole is narrowing to the top; clypeal carina more V shaped	 	*S. corticalis/zeteki*

Monomorium

150a	Head and gaster dark, mesosoma much lighter in color.	*M. floricola*
		
150b	Head and mesosoma yellowish.	➔ 151
151a	Mesosoma without setae; small part of the anterior side of the 1st gastertergite is contrasting lighter than rest of the dark gaster.	*M. sahlbergi*
		
151b	Mesosoma with > 2 setae; gaster at most brownish darkened apically.	*M. pharaonis*
		

Cardiocondyla

160a		*C. emeryi*
160b		*C. mauritanica*

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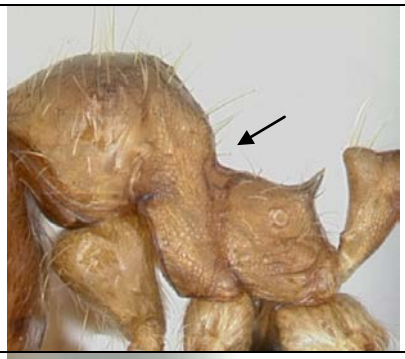
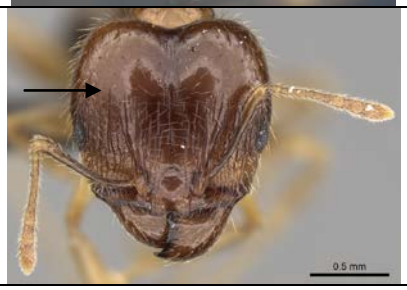
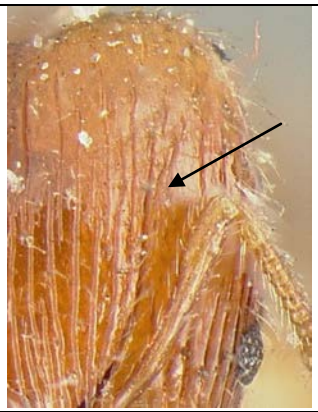
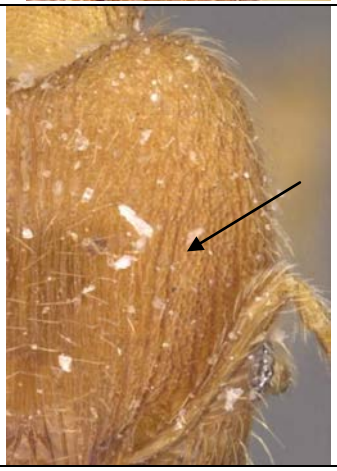
Strumigenys

170a	Mandibles relatively short; 4-segmented antenna.		*S. emmae*
170b	Mandibles slender and tall; 6-segmented antenna.		➔ 171

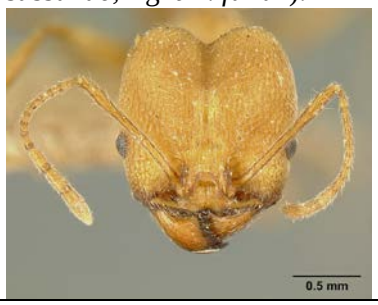
171a			*S. eggersi*
171b			*S. silvestrii*

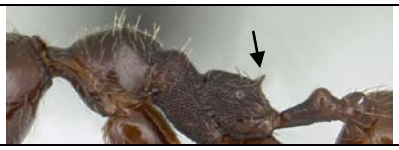
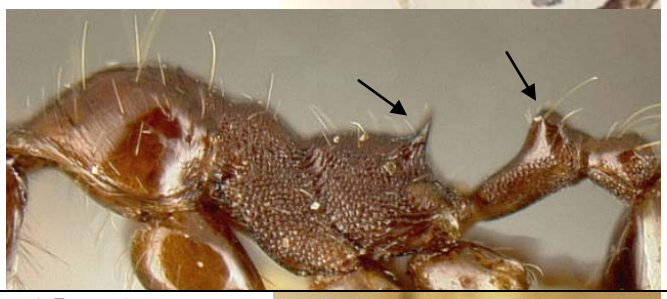
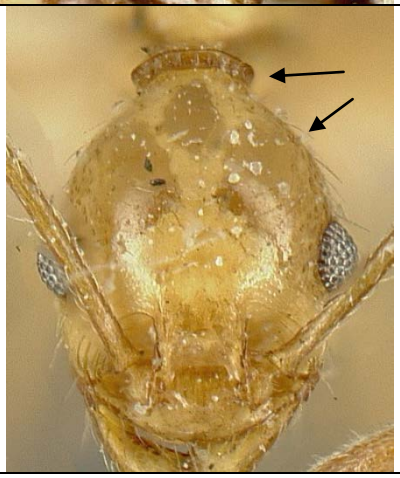
Pheidole

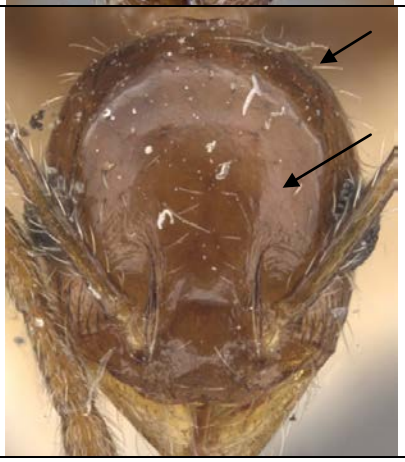
180a	In lateral view: mesosoma with 1 impression.		➔ 181
180b	In lateral view: mesosoma with 2 impressions.		➔ 185

181a	Major worker.		➔ 182
181b	Minor worker.		➔ 184
182a	Relatively large species, CW > 1,2 mm; carinae on frontal side of head do not reach the occipital border.		*P. megacephala*
182b	Small species, CW < 0,9 mm; carinae on frontal side of the head comes up to the occipital border.		➔ 183
183a	With (weak) antennal scrobe. 		*P. exigua*
183b	Without antennal scrobe. 		*P. sculptior* Occurrence uncertain on the ABC islands

184a	Head and pronotum smooth, postpetiole ventraly bulging; CW > 0.45 mm.		*P. megacephala*
184b	Head and pronotum foveolate, postpetiole not ventraly bulging; CW < 0.45 mm.		*P. exigua*
185a	Major worker.		➔ 186
185b	Minor worker.		➔ 191
186a	Scapus exceeds occipital corner; posterior side of the head smooth.		*P. longiscapa*
186b	Scapus shorter; posterior side of the head with structure.		➔ 187
187a	Mesosoma without or with appressed short setae.		*P. radoszkowskii*
187b	Mesoma with long setae.		➔ 188

188a	Posterior half of the head almost completely without a rugoreticulate structure.		*P. jelski* unknown from the ABC islands
189b	Posterior half of the head with a rugoreticulate structure (left *P. sussanae*, right *P. fallax*). 		➔ 190
190a	In lateral view: petioles high; scapus shorter: SL/CL ca. 0.5.		*P. fallax*
190b	In lateral view: petioles low; scapus longer: SL/CL ca 0.7.		*P. susannae*
191a	Head in frontal view foveolate, like the mesooma and petioli; mesosoma without setae (very small workers with a few, short erected setae).		*P. radoszkowskii*
191b	Head in frontal view smooth.		➔ 192

192a	Prododeal spines reduced to denticles; pronotum smooth.		→ 193
192b	Propodeal spines generally not short; anterior side of pronotum with a few carinulae; setae on pronotum long.  		*P. fallax*
193a	CL/CW about 1,5; occiput narrowed with small nuchal crest. 		*P. sussannae*
193b	CL/CW < 1,5; nuchal crest present.		➔ 194

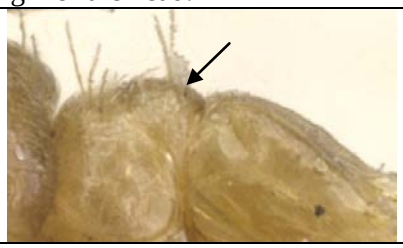
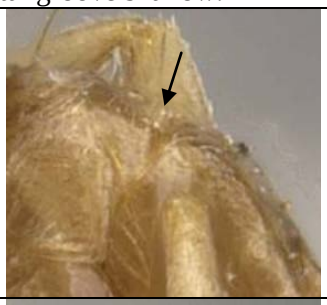
194a	Carinulae on frontal side of head reach up to eye level; head more tapered above the eyes 		*P. jelskii* unknown from the ABC islands
194b	Carinulae on frontal side of head do not reach the eye level; head posterior of the eyes rounder. 		*P. longiscapa*

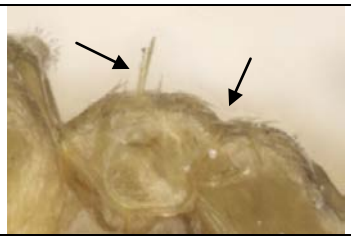
Tapinoma

200. The COI gene sequences concerning *T. melanocephalum* published in BOLD, show greater differences within the species than might be expected if it were one species. So we can better speak of a complex of species: the *T. melanocephalum* species complex.

Brachymyrmex

As much is still unclear about the distribution and taxonomy of *Brachymyrmex*, this key also includes species that may be found on the ABC Islands, given their distribution in northern South America. Because I view many images on antweb.org with the necessary suspicion, I have used images of type specimen as much as possible.

210a	Gaster with dense, appressed pubescence.		➔ 211
210b	Gaster with sparse pubescence.		➔ 215
211a	Scapus do not passes (just reach) the posterior margin of the head; yellowish.		*B. flavidulus* unknown from the ABC islands
211b	Scapus surpasses the posterior margin of the head.		➔ 212
212a	Mesonotum bulging dorsally above the pronotum in lateral view; dull; (light-)brownish.		*B. heeri* unknown from the ABC islands
212b	Mesonotum not bulging; shiny; metanotal groove shallow.		➔ 213
213a	Yellowish.		*B. termitophilus*
213b	Darkly pigmented.		➔ 214

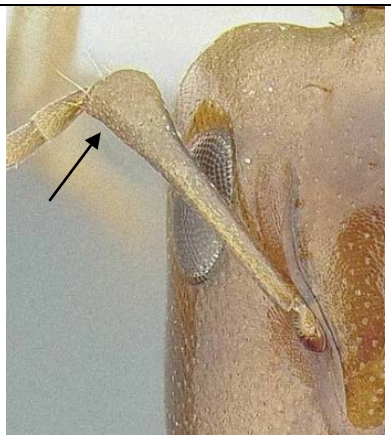
214a	On average 8-10 ommatidia along the maximal eye diameter; CL < 0,5 mm.		*B. obscurior*
214b	On average > 10 ommatidia along the maximal eye diameter; CL > 0,5 mm.		*B.cordemoyi* unknown from the ABC islands
215a	Head and mesosoma yellow, gaster (partly) black.		*B. pictus* unknown from the ABC islands
215b	Body more or less unicolour		➔ 216
216a	Mesosoma with 1 pair of setae on the pronotum; yellowish; 8-9 ommatidia along the maximal eye diameter; CL < 0.4 mm.		*B. minutus*
216b	Mesosoma with 2 pairs of setae.		➔ 217
217a	Yellowish.		➔ 218
217b	Darker pigmented.		➔ 219
218a	Scapi surpassing the posterior margin of the head by a length shorter than the maximum diameter of the eye; metanotal groove shallow or invisible.		*B. australis*
218b	Scapi surpassing the posterior margin of the head by a length exceeding the maximum diameter of the eye; metanotal groove clear (not deep).		*B. aphidicola* unknown from the ABC islands
219a	Metanotal groove shallow or invisible and mesonotum not bulging dorsally.		*B. patagonicus*

219b	Metanotal groove deep; mesonotum bulging dorsally above the pronotum in lateral view.		➔ 220
220a	Metathoracic spiracul low, not protruding dorsally.		*B. musculus* unknown from the ABC islands
220a	Metanotal groove wider than the diameter of the metathoracic spiracles (Please not that the mesosomal setae are absent in *this* specimen).		*B. degener* unknown from the ABC islands

Camponotus

220a	With propodeal spines or teeth; black.	 	*C. bispinosus*
220b	Without propodeal spines of teeth.		➔ 221
221a	Extreme medial convergence in the dense, appressed pubescence on the gastral tergites.		*C. blandus*
221b	Without pubescence in a convergence pattern.		➔ 222
222a	Strongly notched mesosomal lateral profile; variable pale spots on the gaster, dark pigmented.		*C. sexguttatus*
222b	Other characteristics.		➔ 223

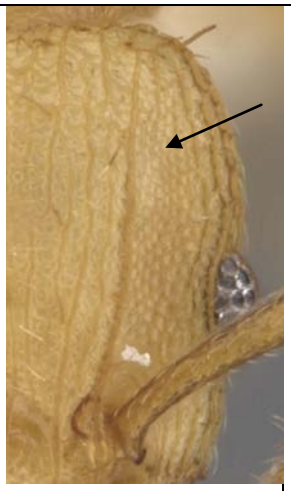
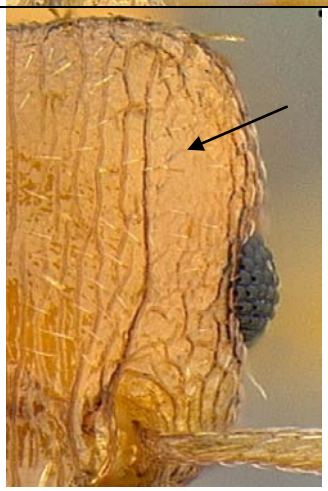
223a	Clypeus carinate with pronounced anterior lobe.		➔ 224
223b	Clypeus not carinate without pronounced anterior lobe.		➔ 227
224a	Scapus without suberected pubescence.		→ 225
224b	Scapus with erected pubescence.		*C. atriceps*
225a	Posteriorside of gastertergites with a yellow ridge.		*C. simillimus*
225b	Higher proportion of yellow pigmentation on gaster tergites.		→ 226
226a	Gaster in lateral view with yellow splotches on each tergite; many setae on whole body. 		*C. substitutis* unknown from the ABC islands

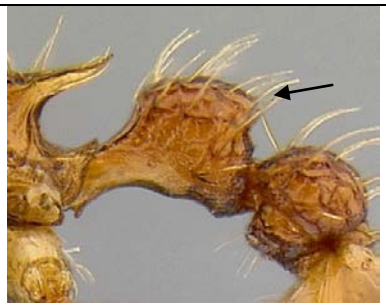
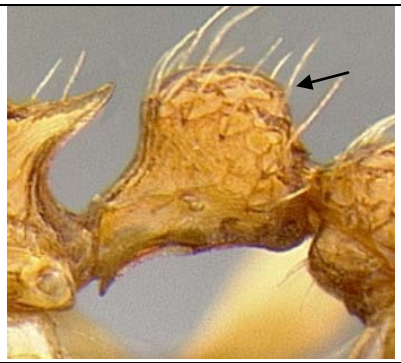
226b	Gaster in lateral view with transverse yellow bands on each tergite; less setae on whole body. 		*C. zonatus*
227a	Few setae on mesosoma; major worker: top of scapus greatly widened. 		*C. claviscapus*
227b	Many setae on mesosoma; major worker: top of scapus not widened.		➔ 228
228a	Head clearly lighter than mesosoma and gaster.		*C. lindigi*
228b	Head mainly black.		*C. crassus*

Nylanderia

230a	Pubesence on dorsal side of gaster not dense.		*N. vividula* unknown from the ABC islands
230b	Pubescence on dorsal side of gaster dense.		➔ 231
231a	Abundant pubescence on mesopleuron or lateral portions of propodeum.		➔ 232
231b	No pubescence present on mesopleuron or lateral portions of propodeum.		➔ 233
232a	Body reddish-brown to yellow; REL less than 30; mesosomal macrosetae long (index of longest pronotal macrosetae / propodeum height at least least 60).		*N. fulva/ pubens*
232b	Body dark brown to almost black; REL greater than 30; mesosomal macrosetae short (index of longest pronotal macrosetae / propodeum height less than 60).		*N. bourbonica* unknown from the ABC islands
233a	Body color brown to yellow; coxae always lighter than mesosoma, becoming white if specimen is yellow.		*N. guatemalensis*
233b	Body color brown to dark brown with meso/metacoxae contrasting bright white to yellow with rest of body.		*N. steinheili* unknown from the ABC islands

Tetramorium

240a	Without very dense (and long) setosity.		➔ 191
240b	Very dense setosity.		***T. lanuginosum***
241a	Propodeal spines short, tooth-shaped; CW < 0.60.		➔ 192
241b	Propodeal spines long en pointed. CW > 0.60		➔ 193
Top part of the antennal scrobes has the same structure as the rest of the scrobe.			242a ***T. simillimum***
Top part of the antennal scrobes has a different structure than the bottom part of the scrobe**.**			242b ***T. caldarium***

243a			***T. insolens*** unknown from the ABC islands
243b			***T. bicarinatum***

Neivamyrmex

250a	Reddish; propodeum notably depressed below level of mesonotum.		***N. curvinotus***
250b	Blackish; propodeum a little depressed below level of mesonotum.		***N. iridescens***