

Fig. 7: Plot of Canonical discriminant analysis.

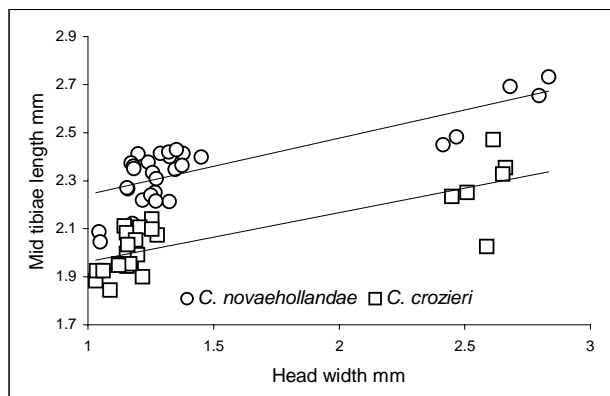


Fig. 8: Regression line for *C. novaehollandiae* ($y = 0.2353x + 2.0061$, $n = 30$, $R^2 = 0.6491$) derived from lumping measurements of specimens from WA and QLD from the same series as sampled for clade (P R) Fig. 3, regression line for *C. crozieri* sp.n. ($y = 0.2043x + 1.759$, $n = 30$, $R^2 = 0.6473$) derived from lumping measurements of specimens from WA and QLD from the same series as sampled for clade (T) in Figure 3.

Relationship between *C. novaehollandiae* and related taxa

The sequence data (Fig. 3) shows that within the Australian taxa studied, *C. tricoloratus* is a distinct clade (X) while the other taxa form a monophyletic group (clades P Q R S T U). This result was expected, as *C. tricoloratus* is clearly morphologically distinct in having an elongated node even though it possesses characters 1 to 4 above. It appears to belong to a group that is widespread across Australia and New Guinea and includes *C. rufus* CRAWLEY, 1925 and *C. subnitidus* MAYR, 1876.

Within the monophyletic group (clades P Q R S T U), there is evidence for three distinct species and possibly more.

1. Specimens in clade U (Fig. 3) are clearly distinct from the other clades (P Q R S T) on both morphological (Fig. 7) and sequence grounds (Fig. 3). This corresponds to *C. humilior* st.n. (see Systematics) and can be separated by its frontal carinae width which can be seen by comparing Figure 4P and Figure 6U.

2. Specimens in Clade T separate from Clades P R on both molecular (Fig. 3) and morphological grounds (Figs. 7,

8) and we consider it represents a separate species, *C. crozieri* sp.n., (see Systematics), which is brown in colour.

3. Specimens in the remaining clades (P Q R S) are either distinctly yellow (clades P R) and closely resemble the type of *C. novaehollandiae* or are brownish (clades Q S). Other than colour we could find no useful character to separate them.

However only a more extensive morphological and molecular study will confirm the boundaries of *C. novaehollandiae*, including whether it is only yellow as represented by clades (P R) or whether it includes brownish specimens represented by clades (Q S) (Fig. 4). In the interim we leave the status of specimens in clades (Q S) unresolved an example of a cryptic species complex and propose that *C. novaehollandiae* includes both yellow and brownish specimens (Fig. 4).

Systematics

Camponotus crozieri sp.n. (Fig. 12)

Type material examined: Holotype: minor worker, pinned, labelled "Qld, Townsville James Cook Uni 19.33775°S 146.7592° E 26/9/05 Simpson SAM Exp 2005" in SAMA. Paratypes: workers, with same label, 3 in SAMA, 3 in ANIC, 3 in QM.

Other material examined (in SAMA): **Northern Territory:** Newcastle Waters (17° 28' S, 133° 35' E), 16.VI.1981, leg. B.B. Lowery; Berrimah (12° 26' S, 130° 55' E), 1.XII.1992, leg. S. Morrison; Cape Crawford, 106 km S (17° 36' S, 135° 47' E), 4.IV.2003, leg. R. Foster, A. Skinner; Darwin (12° 27' S, 130° 50' E), 1.VI.1991, leg. S. Morrison; Darwin (12° 27' S, 130° 50' E), leg. W.K. Hunt; Jabiru (12° 40' S, 132° 54' E), 22.II.1992, leg. S. Morrison.

Queensland: Doonan (26° 28' S, 153° 01' E), 16.II.1987, leg. "D.A.I."; Bli Bli (26° 37' S, 153° 02' E), 23.IV.1996, leg. R. Eastwood; Brisbane (27° 28' S, 153° 02' E), 1.II.1988, leg. E. Cartley; Calliope Crossing (23° 58' S, 151° 09' E), 31.X.1995, leg. R. Eastwood; Emerald (23° 31' S, 148° 10' E), leg. K. Schneider; Esk (27° 14' S, 152° 25' E), 1.IX.1954, leg. "RD"; Highvale (27° 23' S, 152° 48' E), 28.V.1958, leg. F.A. Perkins; Kennedy (18° 12' S, 145° 57' E), 2.IV.1990, leg. R. Piper; Mareeba (17° 00' S, 145° 26' E), 23.IX.1960, leg. G.W. Saunders; Mareeba (17° 00' S, 145° 26' E), 7.I.1970, leg. J. H. Barrett; Maryborough (25° 32' S, 152° 42' E), 29.I.2000, leg. R. Eastwood, D. Lohman; Mornington Island (16° 31' S, 139° 39' E), 3.IV.1960, leg. P. Aitken, N. B. Tindale; Townsville (19° 16' S, 146° 49' E), 2.II.1997, leg. C.H. Watts; Cairns (16° 55' S, 145° 46' E), 14.IX.1992, leg. B. Hoffman; Dunwich (27° 30' S, 153° 24' E), 15.IV.1960, leg. E.M. Exley; Iron Range (12° 44' S, 143° 17' E), 18.VI.1999, leg. L. Hunt. **Western Australia:** Broome (7° 58' S, 122° 14' E), 16.IX.2005, leg. A.J. McArthur, A.A. Simpson; Cape Bertholet (17° 14' S, 122° 11' E), 22.IV.1977, leg. D.H. Colless; Cape Leveque (16° 24' S, 122° 55' E), 4.VI.1998, leg. D. Hirst; Derby (17° 19' S, 123° 38' E), 4.X.1913, leg. W.D. Dodd.

Worker diagnosis: Workers. HW 1.0 - 2.7; HL 1.6 - 2.9; PW 1.0 - 1.6; ($n = 10$). Mesosoma elongate with a distinct but well rounded propodeal angle; brown; tibiae and scapes with distinct setae raised up to 30°, a few scattered long setae overall including under head. Major worker. Head sides posterior half parallel, anterior half tapering to front; anterior margin of clypeus, strongly projecting with square corners, feebly concave between; node summit blunt.