

***Neoponera* Emery, 1901 (Hymenoptera: Formicidae) revisited: 1.**

The *N. laevigata* species-group

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Supplementary material

Supplementary Material S2

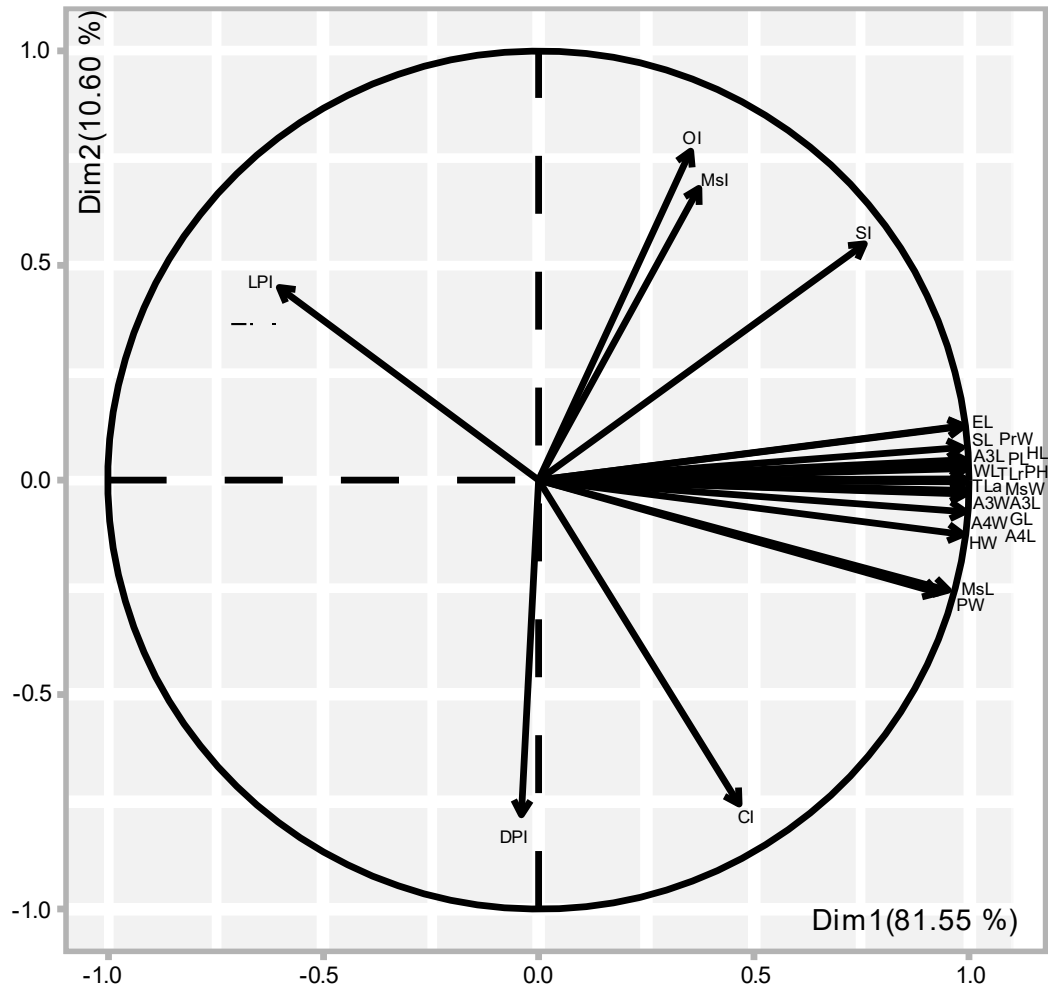


Fig. S1. Relative quality of each of the 24 morphometric variables considered in the principal components analysis (PCA). The closer each variable is to the circular margin, the better (or suitable) it is for explaining the variance (ca. 92%) among the observations represented in the two dimensions of the plot. Please see the variables definitions under “Materials and methods”.

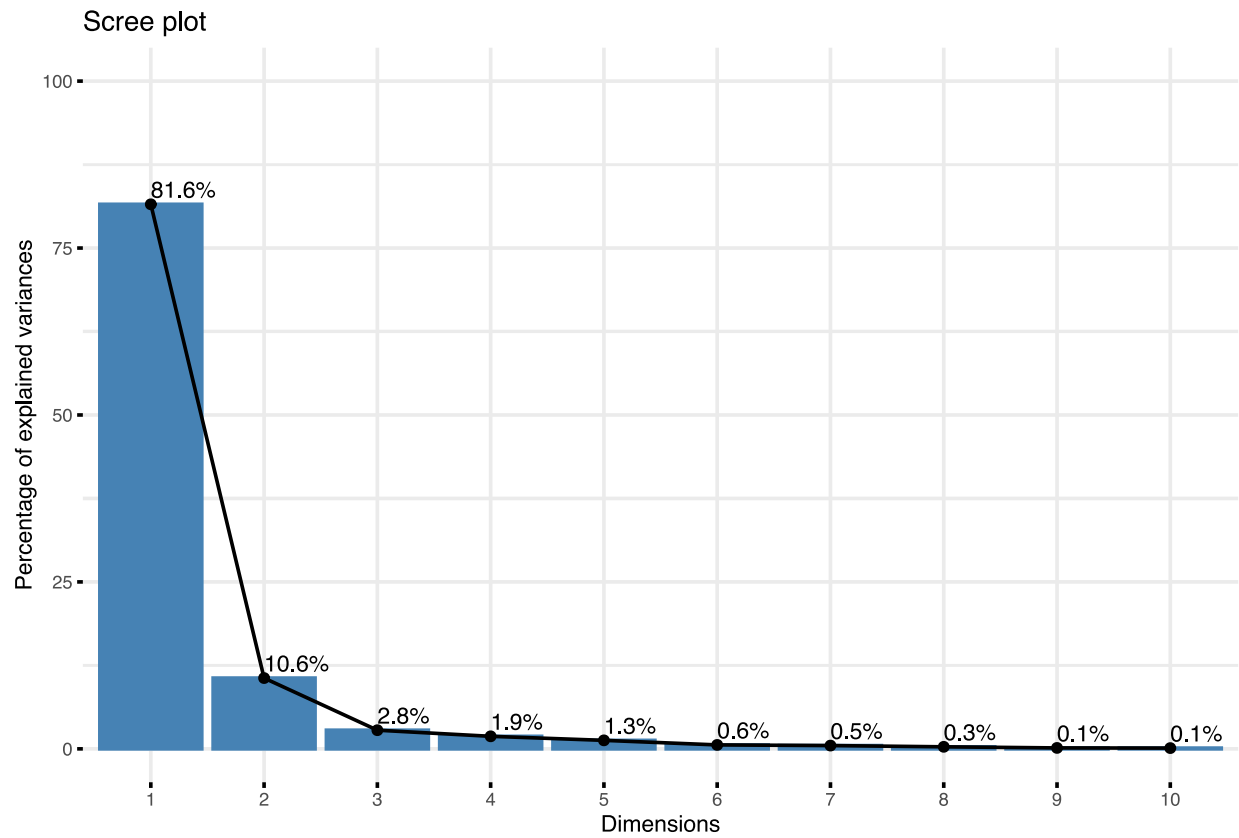


Fig. S2. Percentage of the total variance explained by all 10 dimensions considered in the PCA.

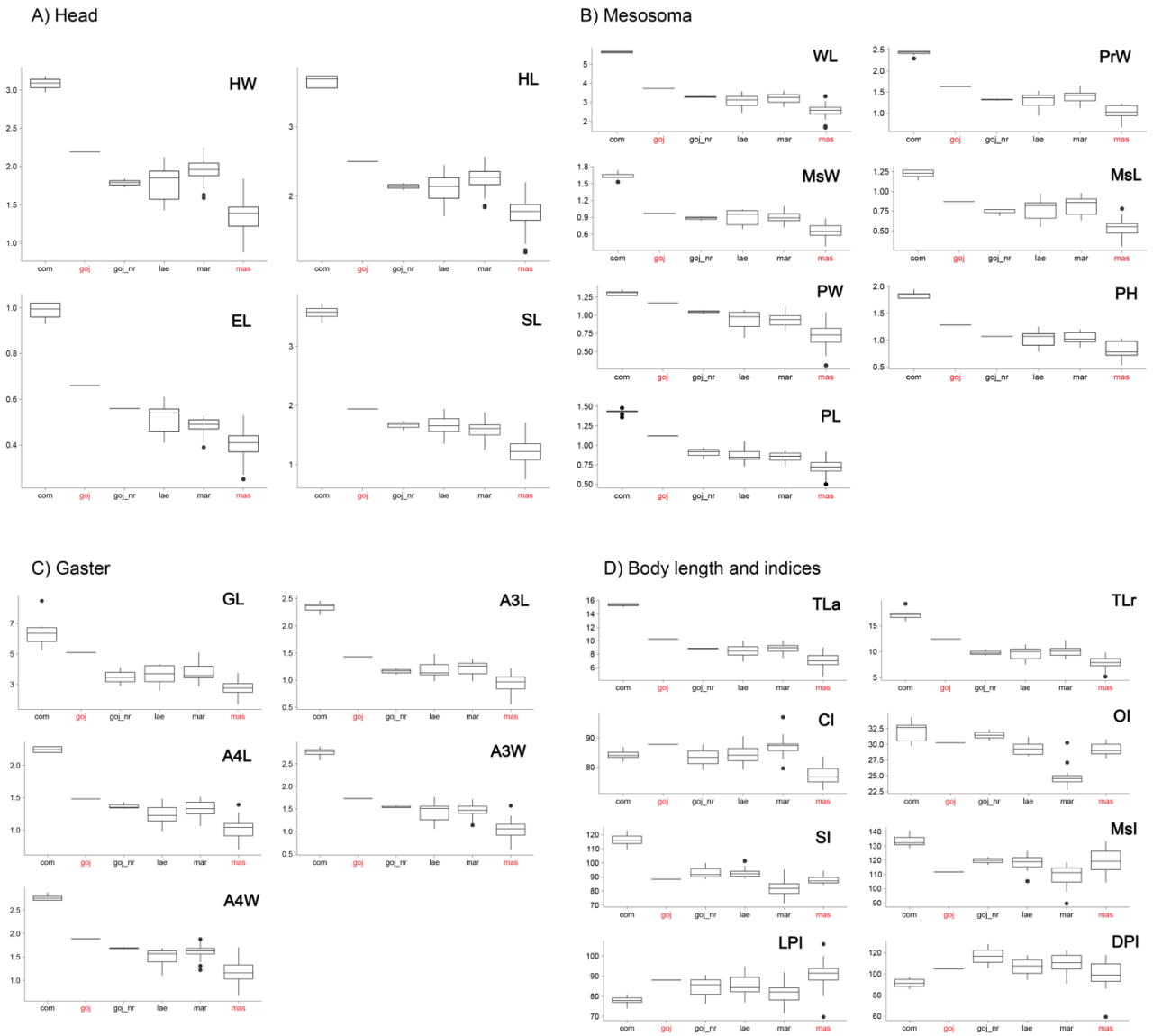


Fig. S3. Boxplots of the 24 morphometric variables (abbreviated, upper right corner on each plot) used in the ordination tests. Only workers considered. On the y axes are represented the scales of the measurements (mm), and on the x axes the treated species (in red the new species): **com** – *Neoponera commutata* ($N = 8$); **goj** – *N. gojira* n. sp. ($N = 1$); **goj_nr** – *N. near gojira* ($N = 3$); **lae** – *N. laevigata* ($N = 10$); **mar** – *N. marginata* ($N = 16$); **mas** – *N. mashpi* n. sp. ($N = 21$). Please see the variables definitions under “Materials and methods”.

Results of the PERMANOVA test

Output from R package. PERMANOVA test using the Gower method (Gower 1971) with 1000 permutations:

Permutation test for adonis under reduced model

Terms added sequentially (first to last)

Permutation: free

Number of permutations: 1000

```
adonis2(formula = var_morpho ~ Species, data = Species, permutations = 1000, method = "gower")
```

	Df	SumOfSqs	R2	F	Pr(>F)
Species	5	2.46017	0.85431	62.157	0.000999 ***
Residual	53	0.41955	0.14569		
Total	58	2.87972	1.00000		

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Results of the pairwise contrast test

Output from R package using the pairwise.adonis function (Pedro Martinez Arbizu, unpublished); the * under “p-adjusted” denotes significant statistical differences:

Species pairs	F.Model	R2	p.value	p.adjusted
COM vs GOJ	27.9668918	0.79981063	0.11	1
COM vs LAE	58.0698966	0.78398782	0.001	0.015*
COM vs MAR	89.8800536	0.80336084	0.001	0.015*
COM vs MAS	61.4277584	0.69466601	0.001	0.015*
COM vs GOJ_nr	42.9546666	0.82677206	0.008	0.12
GOJ vs LAE	1.0074318	0.10066836	0.66	1
GOJ vs MAR	1.0937898	0.06796347	0.35	1
GOJ vs MAS	1.7647124	0.08108136	0.174	1
GOJ vs GOJ_nr	1.0844311	0.35158222	0.5	1
LAE vs MAR	9.156553	0.27616119	0.001	0.015*
LAE vs MAS	6.994565	0.19432281	0.002	0.03*
LAE vs GOJ_nr	0.8822839	0.07425205	0.439	1
MAR vs MAS	26.483416	0.4307408	0.001	0.015*
MAR vs GOJ_nr	3.8976502	0.18651141	0.011	0.165
MAS vs GOJ_nr	4.4409937	0.16795865	0.016	0.24

Species. **COM** – *Neoponera commutata*; **GOJ** – *N. gojira* sp. nov.; **GOJ_nr.** – *N.* near *gojira*; **MAR** – *N. marginata*; **MAS** – *N. mashpi* sp. nov.

Reference

Gower, J.C. (1971) A general coefficient of similarity and some of its properties. *Biometrics*. **27**: 857-871