

Testing the Sinistral Bias of *Pheidole megacephala*, *Tapinoma melanocephalum*, and *Paratrechina longicornis*

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This experiment was conducted to determine whether the *Pheidole Megacephala*, *Tapinoma Melanocephalum*, and *Paratrechina Longicornis* are sinistral or dextrmanual or ambidextrous. It was hypothesized all three species of ants are not only sinistral but also dextrmanual or ambidextrous. *Pheidole Megacephala* has a behavior of being dextrmanual. *Tapinoma Melanocephalum* has a behavior of being dextrmanual. *Paratrechina Longicornis* has a behavior of being ambidextrous. However, about 16% of the *Pheidole Megacephala*, and 7% of the *Paratrechina Longicornis* are sinistrality. Under a microscope, the mandible of a sinistral *Pheidole Megacephala* overlaps the right one, and the dextrmanual ants, the right mandible, overlap the left. The mandible of a sinistral *Paratrchina Longicornis* overlaps the right one, and the dextrmanual ants, the right mandible overlaps the left. The mandible of a *Tapinoma Melanocephalum* is not overlapping one another, but their mandible level is the same, and that may be why they are ambidextrous.

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