= Prionomyrmecini =

Prionomyrmecini is an ant tribe belonging to the subfamily Myrmeciinae established by William Morton Wheeler in 1915 . Two members are a part of this tribe , the extant Nothomyrmecia and the extinct Prionomyrmex . The tribe was once considered a subfamily due to the similarities between Nothomyrmecia and Prionomyrmex , but such reclassification was not widely accepted by the scientific community . These ants can be identified by their long slender bodies , powerful stingers and elongated mandibles . Fossil Prionomyrmecini ants were once found throughout Europe , possibly nesting in trees and preferring jungle habitats . Today , Prionomyrmecini is only found in Australia , preferring old @-@ growth mallee woodland surrounded by Eucalyptus trees . Nothomyrmecia workers feed on nectar and arthropods , using their compound eyes for prey and navigational purposes . Owing to their primitive nature , they do not recruit others to food sources or create pheromone trails . Nothomyrmecia colonies are small , consisting of 50 to 100 individuals .

= = Taxonomy = =

Prionomyrmecini was originally described in 1915 by American entomologist William Morton Wheeler in his journal article " The ants of the Baltic amber " , who originally placed it in the subfamily Ponerinae . In the same journal , Wheeler assigned Prionomyrmex as the sole member of the tribe . In 1954 , William Brown Jr. moved the tribe to Myrmeciinae , noting similar morphological characteristics of Prionomyrmex and other genera such as Myrmecia and Nothomyrmecia . In 2000 , Cesare Baroni Urbani described a new fossil species from Baltic amber , which he named Prionomyrmex janzeni . After examining specimens of his newly described species and Nothomyrmecia , Baroni Urbani noted that Prionomyrmex is a paraphyletic relative to Nothomyrmecia , and the two genera were so morphologically similar that Nothomyrmecia must be synonymised . Due to this , Baroni Urbani separated Prionomyrmex from Myrmeciinae and synonymised Nothomyrmecia , renaming Nothomyrmecia macrops as Prionomyrmex macrops . The tribe itself was later treated as a subfamily , known as Prionomyrmeciinae . In 2003 , Dlussky & Perfilieva separated Nothomyrmecia from Prionomyrmex and both genera were moved to the subfamily Myrmeciinae , and Prionomyrmecini was treated as a tribe . In 2005 and 2008 , Baroni Urbani provided additional evidence in favour of his proposed classification , but such proposal has been rejected by the entomological community . Nothomyrmecia macrops and the extinct Prionomyrmex are the only accepted members of the tribe .

= = Description and distribution = =

Members of Prionomyrmecini can be distinguished from other members by the reduced or lacking ocelli , and a lateral clypeal carina is present . Prionomyrmex ants are characterised by their large size , slender bodies , elongated mandibles and powerful stingers . Lengths vary from 12 to 14 millimetres (0 @.@ 47 to 0 @.@ 55 in) . Overall , the body structure of Prionomyrmex shows that it is more primitive than Myrmecia . Nothomyrmecia is smaller than Prionomyrmex species , measuring 9 @.@ 7 ? 11 mm (0 @.@ 38 ? 0 @.@ 43 in) . The ant has a long stinger , the body is slender and , like Prionomyrmex , has elongated mandibles . The mandibles , however , are less specialised than Myrmecia and Prionomyrmex , elongated and triangular . While Nothomyrmecia and Prionomyrmex are strikingly similar to each other , they can be distinguished from the shape of the node .

Fossil Prionomyrmecini ants existed in Europe during the Eocene and Late Oligocene . Cesare Baroni Urbani collected Prionomyrmex janzeni in Baltic amber from Kaliningrad , Russia and Prionomyrmex wappleri in Germany . Austrian entomologist Gustav Mayr collected Prionomyrmex longiceps in Baltic amber from the Eocene , but the exact location of its discovery is unclear , due to the lost type material . P. longiceps were an arboreal nesting species , living in trees instead of the ground . William Morton Wheeler assumed this due to its long legs , sharp claws and elongated mandibles . Prionomyrmex may have preferred a jungle habitat at low elevations .

Nothomyrmecia is only found in Australia . Until its rediscovery , the genus was only known from the original specimens collected in Western Australia by Amy Crocker in December 1931 . Entomologist Robert W. Taylor expressed doubt about the type locality of the ant , but said that the specimens were probably collected from the western end of the Great Australian Bight , south from Balladonia . Entomologists feared that Nothomyrmecia was extinct , as notable biologists such as E.O. Wilson made attempts to find the ant but failed to do so . In 1977 , Taylor rediscovered Nothomyrmecia in Poochera , 1300 km (800 mi) away from the original collection site . Colonies are found in old growth mallee woodland with many Eucalyptus species such as Eucalyptus brachycalyx , Eucalyptus oleosa and Eucalyptus gracilis abundant . Only a few small colonies are known in its restricted distribution , listing it as Critically Endangered by the International Union for Conservation of Nature .

= = Behaviour and ecology = =

Nothomyrmecia and Prionomyrmex share similar behaviours with other Myrmeciinae relatives . Prionomyrmex may have foraged on the ground or onto trees and low vegetation , feeding on nectar and arthropods . Nothomyrmecia workers , however , drink hemolymph from the insects they capture , and the larvae are carnivorous . It is not known if the ants were active during the day or night , but Nothomyrmecia is a nocturnal ground forager that prefers very cold nights . Both ants have large compound eyes , relying on their vision for prey and navigational purposes . Due to their primitive and simplified social life , workers of both genera do not recruit others to food sources or leave down trail pheromones , suggesting that both these ants are solitary foragers . Prionomyrmex ants were hosts to female stylopid parasites . Predators are unknown for both ants .

Nothomyrmecia queens are brachypterous , meaning that they have stubby rudimentary wings that render them flightless . This may correlate with population structure , possibly as an adaptation in small populated colonies or by unusual ecological requirements . The alates may begin to emerge in late summer and early autumn (March or April) , and colony @-@ founding queens excavate to considerable depths underground ; queens start to lay eggs by spring . Queens are univoltine and only produce a single generation of ants annually , and eggs may take 12 months to fully develop . When a colony is mature , only 50 to 100 individuals are present in each nest . In some colonies , colony founding can occur within a colony itself when a queen dies , taken over by one of her daughters . This method of colony founding may render a nest immortal .