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The Chironomidae fauna of early Eocene Cambay amber reveals unusual Tanytarsini (Diptera: Chironomidae)

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The Tanytarsini, today a species-rich tribe within the family Chironomidae, is known also from a high diversity in the Eocene. A significant number of representatives have so far been described from various fossil resins originating from that epoch, i.e., from amber of the Baltic region (including the specimens preserved in Rovno amber) (~43–48 Ma), from Fushun amber from China (~50–53 Ma), and now also from early Eocene Indian amber (54 Ma).

Several species of four tanytarsine genera have been found in a rich material obtained from the Tadkeshwar and Vastan lignite mines located in Gujarat state in northwest India.

The recently established genus *Gujaratomyia* Gilka & Zakrzewska, 2018, described on the basis of 3 well-preserved adult males of *Gujaratomyia miripes* Gilka & Zakrzewska, 2018 shows a unique composition of leg characters that have not been observed in other fossil or extant Tanytarsini. A frail and simply branched median volsella is a key feature for *Tanytarsus* sp. 1, whereas long, narrow and pointed gonostyli separates *Tanytarsus* sp. 2 from other Eocene *Tanytarsus* species. *Stempellina* sp. 1 combines characters typical of extant species, but also those of other genera (e.g. anal point spinulae), most likely derived from a close ancestral common group. *Stempellinella* sp. 1 shows another unique feature – an additional, stout thumb-shaped process located on the hypopygial inferior volsella, this structure present only in a few extant species but strongly reduced.

The examined zooinclusions contain 192 specimens of five Chironomidae subfamilies: Chironominae, Orthocladiinae, Tanypodinae, Podonominae and Prodiamesinae.

Except for the Podonominae record, the composition of Cambay amber chironomids most closely resembles a Dominican amber fauna. The presence of genera dwelling in freshwater habitats, both lentic and lotic, along with other dipteran groups recorded in amber pieces from this deposit, have allowed us to sketch a probable composition of locally separated, diverse aquatic and semi-aquatic paleohabitats.