SEX RATIO AS AN INDICATOR OF GEOGRAPHICAL PARTHENOGENESIS IN *Talitroides topitotum* (AMPHIPODA, PERACARIDA)

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The species *Talitroides topitotum* (Burt, 1934), a terrestrial amphipod original from the Java Islands (Indonesia) and introduced to Brazil, was recently characterized as geographically parthenogenetic. That is, throughout its cosmopolitan distribution, this species exhibits distinct modes of reproduction: in certain regions, populations reproduce sexually, while in others, reproduction is asexual. We aim to investigate whether the reproductive mode used by populations of *T. topitotum* is associated with the dispersal process of this species. For this, we analyzed the available data on sex ratios in population studies conducted in different regions of the world. We considered studies carried out in Hong Kong (China), Tlalnepantla de Baz (Mexico), and in three Brazilian states (Paraná, São Paulo, and Rio Grande do Sul). The population of China (a region geographically near to the origin area of the species) showed a seasonal sex ratio, with fluctuations between males and females over time, but maintaining values close to the 1:1 equilibrium. In contrast, in Mexico, a constant deviation in the sex ratio was observed, with a predominance of females in all samples, suggesting a possible transition towards parthenogenesis in reproduction. In population studies conducted in Brazil, only females and juveniles were recorded, with no evidence of males, which constitutes a strong indication of exclusively parthenogenetic reproduction in these populations; in a taxonomic study, an extreme deviation was observed (400 females: 1 male). These data suggest a possible geographic gradient in the mode of reproduction: populations closer to the native region maintain a pattern of sexual reproduction, with a sex ratio close to 1:1, whereas more distant populations exhibit marked deviations in this ratio, possibly involving facultative parthenogenesis, which culminates in some apparently exclusively parthenogenetic lineages. Based on this pattern, we hypothesize that parthenogenesis in *T. topitotum* may emerge as a reproductive strategy favored in contexts of dispersal and colonization, particularly in areas further away from the center of origin of the species. For this, additional studies incorporating phylogeographic analyses are necessary to test this hypothesis and understand where and when asexual lineages emerged in *T. topitotum*.

Keywords: asexual reproduction; terrestrial amphipod; thelytoky.