

NEW SPECIES OF THE GENUS *AMPHIPLEURA* FOUND IN NEOTROPICS

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The diatom genus *Amphipleura* Kutzing (1844) is characterized as a naviculoid diatom with raphe slits at the two poles which are separated by a narrow axial sternum. There are currently approximately twelve described taxa within the genus *Amphipleura*. We describe a potential new species of the genus *Amphipleura* which was collected in streams in the neotropics which is morphologically most closely related to *A. lindheimeri* Kützing and *A. lindheimeri* var. *neotropica* Frenguelli. Morphologically, this potentially new taxon has a much larger width than other *Amphipleura* taxa. We examined specimens from four sites in Costa Rica and Panama using light microscope with brightfield optics to measure total length, width, and raphe lengths of all specimens.

First, we compared the morphometrics of the new species to those of *A. lindheimeri* and *A. lindheimeri* var. *neotropica*. The length range is continuous among the three diatom taxa but is 150-210 μm in *Amphipleura* sp. since individuals with the much larger width were found to be in this length range. Results indicate that *Amphipleura* sp. has a width range of 33-70 μm compared to *A. lindheimeri* and *A. lindheimeri* var. *neotropica* which range from 23-27 μm and 27-32 μm accordingly. In addition, the raphe length of *Amphipleura* sp. appears to be larger than the two known species with a proportion of around 1:3 to 1:14 of valve length. Length to width scatter plots demonstrate complete separation between populations of this new taxon and populations of *A. lindheimeri*. Preliminary analysis supports the description of a new species of *Amphipleura* based on morphological differences including width.

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