

Geometric morphometrics and the study of biologic shapes: From descriptive to quantitative morphology

Morfometría geométrica y el estudio de las formas biológicas: De la morfología descriptiva a la morfología cuantitativa

Ibacache, María Viviana Toro

Soto, Germán Manriquez

Galdames, Iván Suazo

Morphometrics is the study of co-variation of biological form and its causes. Its development over the last decades has reached several biological sciences with a traditional descriptive approach, such as morphological sciences. The new geometric morphometric tools allow not only objective quantitative analysis, but also to assess qualitative traits due to the chance of recovering the form under study. This is possible because of the application of biometry techniques, instruments and software that allow the acquisition and analysis of shape coordinates that represent the geometry of the specimen, and that are not limited to obtaining linear data that lack of precision and amount of information of geometric data. Geometric morphometric analysis consists of three fundamental steps: obtaining primary data, obtaining shape variables and statistical analysis. The extensive use of this technique in areas related to morphological sciences over the last years makes geometric morphometrics a m