

Post-collection taphonomy, sampling effects and the role of the collector in palaeontological collections: A case study from an early Late Triassic bone accumulation in southernmost Brazil

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One of the main “databases”, on which palaeontologists carry on their studies, is constituted by palaeontological collections. These collections are the final result of fieldwork and surveys, sampling activities, preparation and curatorial processes, and analyses. However, the content of a palaeontological collection can also be strongly biased, leading researchers to post-collection skewed results. Post-collection biases (e.g., breakage, loss of fragments, etc.) are directly linked to human activities, occurring during excavation, transport, preparation, and storage. Here, we present the case of the vertebrate remains from the Brazilian lower Carnian *Santacruzodon* Assemblage Zone (Santa Cruz Sequence, Santa Maria Supersequence, Paraná Basin). The studied specimens came from the Schoenstatt Sanctuary fossil site, a key outcrop for both the sequence and *Santacruzodon* AZ. We evaluated vertebrate remains from three Brazilian scientific collections, compiled through more than 25 years of fieldwork. The specimens housed in the three collections present high degrees of post-collection fragmentation, as well as significant differences in the bone elements present, when comparing cranial vs. post-cranial elements. Moreover, some differences in curatorial attitude have also been noticed, especially in restoration choices, leading to “discrimination” in post-collection fossil quality and highlighting the existence of the “craniocentrism” problem.

Key words: Anthropogenic bias, anthropogenic breakage, Schoenstatt Sanctuary site, *Santacruzodon* AZ, Carnian, Triassic, South America.

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