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Conference Abstract

The ePANDDA project: linking the Paleobiology Database, iDigBio, and iDigPaleo for biological and paleontological research, collections management, and outreach

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Abstract

There are several online paleontological resources that serve a diversity of needs: the Paleobiology Database (PaleoBioDB), a database of fossil occurrences built largely from the primary scientific literature; iDigBio, the national hub for neontological and paleontological specimen data; and iDigPaleo, a specimen-based website built for educational use. While each resource is useful on its own, aggregating data from them is laborious and problematic, as the connectivity between modern and fossil, and specimen and literature-based, resources does not currently exist. Funded by the NSF EarthCube initiative (ICER 1821039), the enhancing Paleontological and Neontological Data Discovery API (ePANDDA) project is using application programming interfaces (APIs) to integrate the paleontological and neontological resources of these three sites. The ePANDDA API

returns comprehensive data to the user on all aspects of specimens and taxa. For example, a neontologist could search the ePANDDA API (available at: https://api.epandda.org) using a taxonomic name. In addition to modern specimen records available in iDigBio, they will receive paleontological collections information from iDigPaleo and the PaleoBioDB. The connectivity of these resources facilitates addressing research questions currently difficult to answer, even with multiple researchers working as a group.

The ePANDDA API was demonstrated to programmers and end users at a “hackathon” in the fall of 2017, resulting in significant modifications to the API based on end user needs. The epandda team also sought the input of end users in the creation of software widgets that use the API via two workshops in 2016. During this presentation, we will demonstrate several of these software widgets (available at: https://epandda.org), including one that geolocates a user and displays records from all three databases of all organisms within a specified radius. We will also showcase how the PaleoBioDB will use the ePANDDA API to display links to specimen images within iDigBio. The presentation will also include examples and plans for how ePANDDA can collaborate with other existing geological and biological resources.

Keywords

iDigBio; iDigPaleo; Paleobiology Database; PBDB; epandda

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