iDigBio API

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The iDigBio Search Portal

• The search portal is pretty cool, but how did all that data get there?
The iDigBio API

• Application Programming Interface (defined)
  – An application program interface (API) is a set of routines, protocols and tools for building software applications. Basically, an API specifies how software components should interact\(^1\).

• In practice, you make a request using the defined API and then process the result.

• Returns JSON (JavaScript Objection Notation), "similar" to XML in purpose, but not in layout. "human readable".

iDigBio Specimen Record Page

GET {0}/v2/search/records/?rq={rq}&limit={limit}

http://search.idigbio.org/v2/search/records?rq="uuid":"f4c5d799-9bba-4780-b7f8-8a38096042c3"

uuid: "7644703a-ce24-4f7b-b800-66dd8812f86",
itemCount: 1,
name: "Albion R. Hodgdon Herbarium, University of New Hampshire",
description: "The NHA herbarium comprises approximately 200,000 specimens (120,000 collection contains a combination of historic and recently collected specimens, taxonomic, ecological, and biogeographic research. While our specimens represent especially strong in representing freshwater and marine habitats. An additional logo: http://portal.neherbaria.org/portal/images/collicons/NHA_logo_60px.gif",
url: "http://www.unh.edu/herbarium/",
  - {
    email: "patrick.sweeney@yale.edu"
  },
  - {
    email: "patrick.sweeney@yale.edu"
  },
  - {
    first_name: "Janet R. Sullivan",
    email: "janets@unh.edu"
  },
  - {
    first_name: "General"
  },
  - {
    first_name: "Janet R. Sullivan",
    email: "janets@unh.edu"
  },
So, why use the iDigBio API?

- The iDigBio API allows your system to easily retrieve information aggregated by iDigBio in new and novel ways.
  - Query iDigBio’s DQ flags to fill in your missing data or find issues your home system is hiding.
  - Quickly compare your collections to other museums.
  - Create an image of the day banner
  - Make charts that go up.
  - Our system may be more responsive, robust, flexible, accessible and dependable than yours.
  - In some instances you can query data easier via the API than via the portal, even querying fields currently unavailable via the search portal.
You can use the iDigBio API to...

- Create
  - Websites
  - Databases
  - Phone Apps
  - Visualizations. Charts, Choropleths, Node-Links, Chord Diagrams, Collapsible Trees
- Integrate with other APIs
  - Data mashups! Tweets, weather trends, geo loc
- Special Queries
- Anything connected to the internet
Invoking the API

It's easy! Do it your own way

- Your favorite web browser
- Almost any modern language, not just JavaScript. Python, C#, R.
- With a stand alone app (e.g. Postman)
- From the command line (e.g. curl)

Use the API across a spectrum of uses from ad-hoc queries to large automated systems that process the results
Invoking the API…

- In your browser

https://github.com/iDigBio/idigbio-search-api/wiki/Code-Samples#browser
Invoking the API…

• In your terminal

https://github.com/iDigBio/idigbio-search-api/wiki/Code-Samples#curl
Invoking the API...

- In Postman
Invoking the API...

• In code

https://github.com/iDigBio/idigbio-search-api/wiki/Code-Samples#javascript--jquery
Data Accessible via the iDigBio API

There are several categories including

• Records / Recordsets
• Publishers
• Media
• Stats / Summary
• Maps
• Meta data

https://github.com/iDigBio/idigbio-search-api/wiki/Examples
iDigBio API Documentation

• In the Search Portal under “Data”

- iDigBio API Wiki
  https://www.idigbio.org/wiki/index.php/IDigBio_API

- iDigBio API Documentation on GitHub
  https://github.com/idigbio/idigbio-search-api/wiki
iDigBio API on GitHub

• Want to learn even more?
  – iDigBio Search API:
    https://github.com/iDigBio/idigbio-search-api
Thank you!
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