

Thoughts on quality with reference to



TaxonWorks

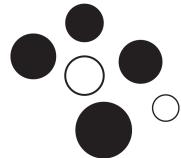
**Matt Yoder - COL 2023 - Allerton, IL**

*with special thanks to the SFG for making it possible  
and the environment/people to develop these ideas*

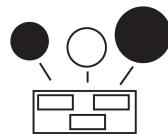
this content is cc0

*quality is systemic*

## Community



## Accessibility



## Data model



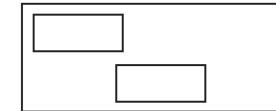
## Provenance



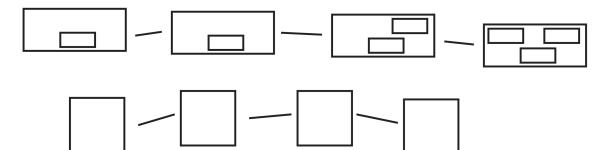
## Responsiveness



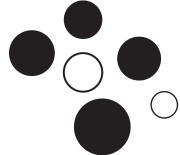
## Software



## Longevity



## Community



Underserved biodiversity scientists



Dogfooding and talking



Dedicated support channels



Community Liaison



178/103 curators in past year/month

should be close to double in the next year



Issues: 698 open / 2367 closed

*people and their expertise = source of quality*

*the heart of data-quality is citation*

## Provenance



Excellent reference management



Cite anything

Go forward one page (→)  
Pull down to show history

TaxonWorks v0.32.2 Issues

Project Administration Account Sign out matt

3i World Auchenorrhyncha Database

## Filter sources

< Back | Next > 1 2 3 4 5 Last » 1 - 50 of 235 records. 60 records per page.

<input type="checkbox"/>	<b>Id</b>	<b>Cached</b>	<b>Year</b>	<b>Type</b>	<b>Documents</b>
<input type="checkbox"/>	13326	Barnes, J., Cummings, K., Dmitriev, D.A., Ernstrom, D., Feist, M.A., Handel, B., Heske, E., Hill, S., Jarvis, J., Kettner, D., Huhs, A., Kurylo, J., Marcum, P., Matthews, J., Mayer, C., Merritt, J., Murphy, M., Philippe, R., Plocher, A. & Sivicek, V. et al. (2012a) Support of the IDOT programs by the INHS collections. <i>Illinois Natural History Survey 2012. The INHS IDOT Programs 2011 Annual Report. Illinois Natural History Survey, Champaign, P. 24.</i>	2012	Source::Bibtex	<input type="button" value="PDF"/>
<input type="checkbox"/>	13409	Bartlett, C.R., Deitz, L.L., Dmitriev, D.A., Sanborn, A.F., Soulier-Perkins, A. & Wallace, M.S. (2018a) The Diversity of the True Hoppers (Hemiptera: Auchenorrhyncha). In R.G. Foottit & P.H. Adler (Eds.), <i>Insect Biodiversity II: Science and Society</i> . Wiley-Blackwell, Chichester, United Kingdom, pp. 501–590. [xxxv + 987 pp. + 21 pls.]	2018	Source::Bibtex	<input type="button" value="PDF"/>
<input type="checkbox"/>	13677	Beckman, M., Deem, L., Eades, D., Dmitriev, D.A. & Et Al. (2012a) Species File Software: a foundation for taxonomic database development. <i>Prairie lightning mini-symposium. Sept. 20, 2012. University of Illinois at Urbana-Champaign, Illinois, Urbana: UIUC. P. 15.</i>	2012	Source::Bibtex	
<input type="checkbox"/>	13678	Beckman, M., Deem, L., Eades, D., Dmitriev, D.A. & Et Al. (2012a) Species File Software: a foundation for taxonomic database development. <i>Prairie lightning mini-symposium. Sept. 20, 2012. University of Illinois at Urbana-Champaign, Illinois, Urbana: UIUC. P. 15.</i>	2012	Source::Bibtex	
<input type="checkbox"/>	123845	Belyayev, N. A. (1960) <i>Morsina gomerae</i> sp. n. (Homoptera, Psylloidea, Psylidae). <i>Zoologicheskii zhurnal</i> , 38(1), 103–104.	1960	Source::Bibtex	
<input type="checkbox"/>	113697	Belyayev, N. A. (1960) <i>Morsina gomerae</i> sp. n. (Homoptera, Psylloidea, Psylidae). <i>Zoologicheskii zhurnal</i> , 38(1), 103–104.	1960	Source::Bibtex	
<input type="checkbox"/>	122861	Belyayev, N. A. (1960) <i>Morsina gomerae</i> sp. n. (Homoptera, Psylloidea, Psylidae). <i>Zoologicheskii zhurnal</i> , 38(1), 103–104.	1960	Source::Bibtex	
<input type="checkbox"/>	15453	Belyayev, N. A. (1960) <i>Morsina gomerae</i> sp. n. (Homoptera, Psylloidea, Psylidae). <i>Zoologicheskii zhurnal</i> , 38(1), 103–104.	1960	Source::Bibtex	
<input type="checkbox"/>	10145	Belyayev, N. A. (1960) <i>Morsina gomerae</i> sp. n. (Homoptera, Psylloidea, Psylidae). <i>Zoologicheskii zhurnal</i> , 38(1), 103–104.	1960	Source::Bibtex	

**Structure and classification**

- Notes
- Verifiers
- Identifiers
- Tags
- Citations
- References
- Alternate values
- Depictions
- Confidences
- Data attributes

### Citations

Source

Quick Recent Pinboard

Search...

Gnezdilov, V.M., López, H. & Suárez, D. (2023) Family Nogodinidae (Hemiptera: Fulgoroidea) from the Canary Islands, with the description of a new species of the genus *Morsina* Melichar, 1902. *Zootaxa*, 5231(5), 567–574. <https://doi.org/10.11646/zootaxa.5231.5.5>

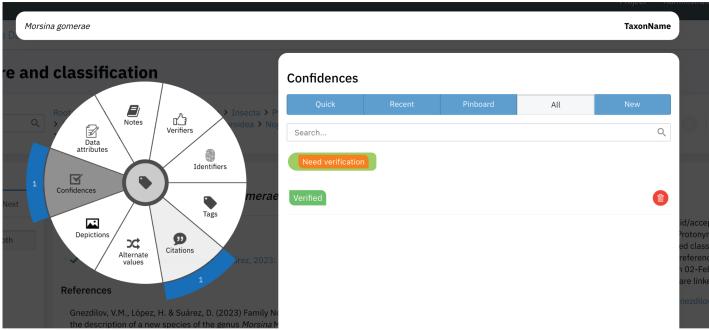
568  Is original

Topics

Quick Recent Pinboard All

Search...

Topic Pages



*Where logic happens*

*Where consistency is built in*

*Where domains are mapped*

## Data model



- Names != Taxa
- Soft validations (426)
- Confidence(s)
- NOMEN - standards
- [docs.taxonworks.org/develop/Data/](https://docs.taxonworks.org/develop/Data/)

Morsina gomerae

## Structure and classification

Gnezdilov, V.M., López, H. & Suárez, D. (2023) Family Notiohylidae. In: Gómez, J. & Nogales, J. (eds.) A new species of the genus *Morsina* (Amphibia, Anura, Notiohylidae) from the island of La Gomera (Canary Islands, Spain). *Zootaxa*, 5207(1), pp. 1–10. doi: 10.11646/zootaxa.5207.1.1

**TaxonName**

### Confidences

- Quick
- Recent
- Pinboard
- All
- New

Search...

Need verification

Verified

Soft Validation

- ⚠ Etymology is missing. Previously used etymology for similar name in different projects: 'from Cuba' (9 times)
- ⚠ Missing relationship: *Paucivena cubana* Nuñez, 2006 should be a secondary homonym or duplicate of *Paucivena cubana*
- ⚠ Part of speech is not specified. The name was previously used in different projects as 'adjective' 12 times 🔧
- ⚠ Primary type is not selected 🔧
- ⚠ Taxon name author role is not selected 🔧

## **Quality as a rich network**

*Potential, untapped and realized quality*

**Potential quality** - knowledgebase (KB) contains (currently) linkable concepts, but no actionable links

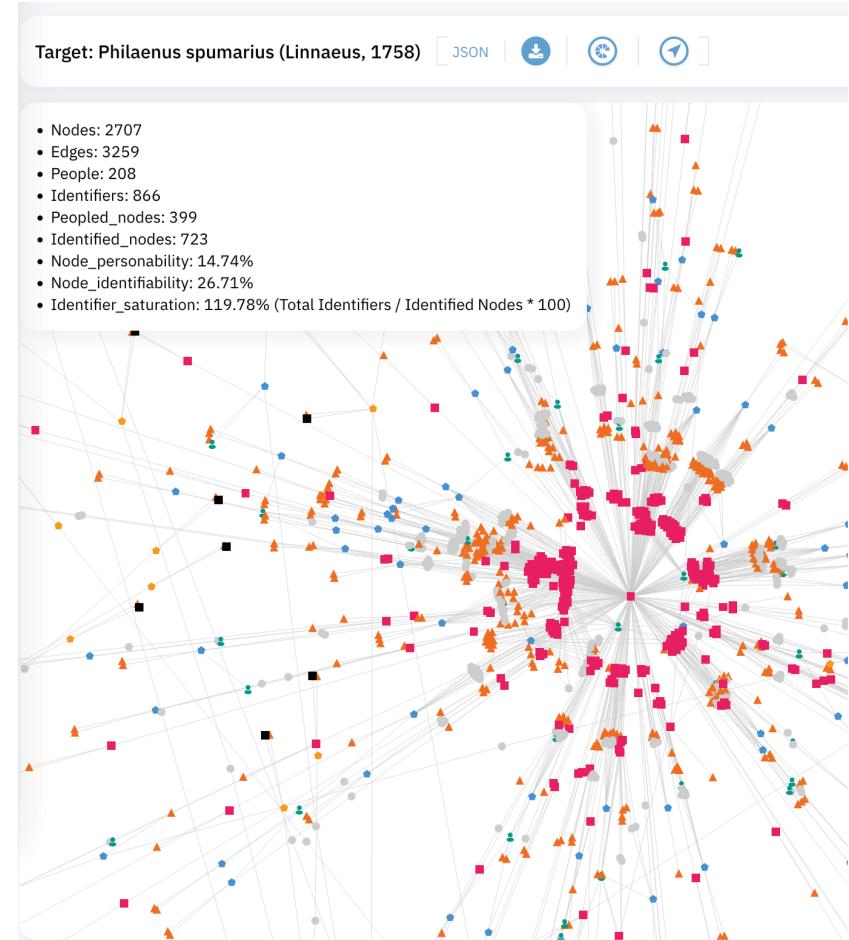
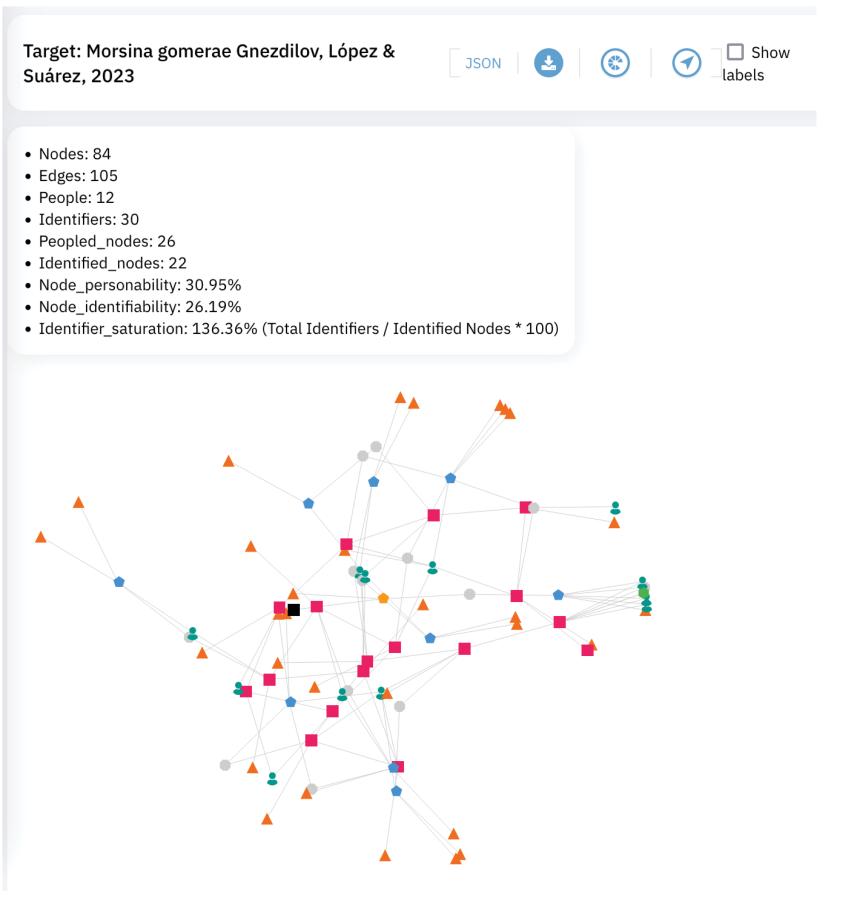
**Untapped quality** - KB references concepts that are linkable

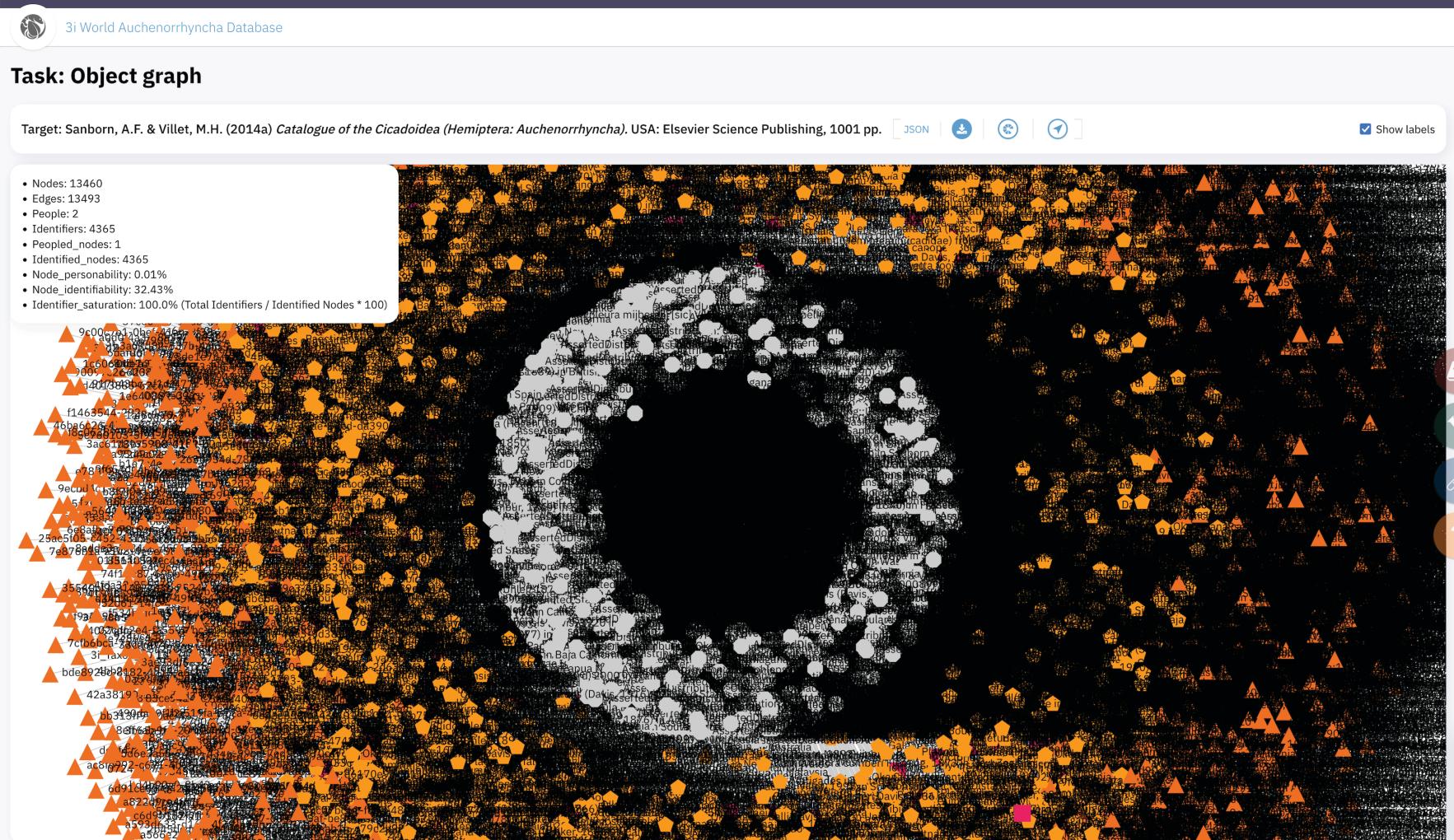
**Realized quality** - KB contains linked concepts

*identifiers as potential quality*

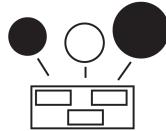


Identify anything, pluralistically





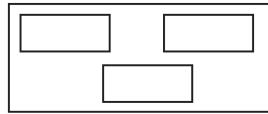
## Accessibility



*more eyes are better*

- Shared community data (Source/People)
- COLDP -> COL
- Darwin Core -> GBIF
- NeXML, TNT, Nexus
- API - [api.taxonworks.org](http://api.taxonworks.org)
- Unified filters, reports, activity
- Companions & Products

# Software



- Open source - Encourage contributions
- Complex models require rich UIs
- Unit Testing
- Continuous Integration
- Minimum barrier to entry (Conventions)

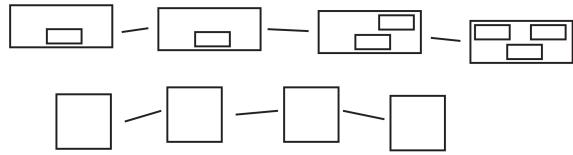
## Responsiveness



*untapped improvements in TaxonWorks*

- Resolving unknowns
  - e.g. fill micro-gaps/ancestors via COL
- Batch changes
  - e.g. Global Lepidoptera Index
- Round tripping (?!)
  - e.g. GBIF feedback
- Models/domain expansion
  - e.g. Lugs, FieldOccurrence, Anatomy, OtuRelationship
- gbifference - their intelligence, your app

## Longevity



*thinking evolutionarily*

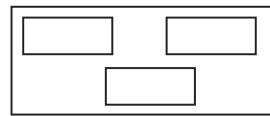
- “Genes” - code sharing
  - Dispersability - spread data around
  - Adaptability - foundation for devs
  - Chance
- ... and other keys*
- Resources - SFG Endowment
  - Institutional memory - 3rd generation
  - Trust, dedication to the tool/services

The Catalogue of Life community can **invest in**

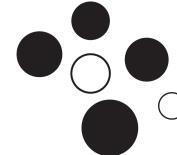


**TaxonWorks**

**Software**



**Community**



*contribute to the code-base,  
hosts instances*

*encourage and facilitate migration  
of “pipeline” COL GSDs*

to improve the **Quality** of the COL

**Thanks!**







