EXPLORING VS. CATALOGING: WHY DON'T SYSTEMATISTS PLAY WELL WITH OTHERS?

Regina Wetzer and N. Dean Pentcheff

Natural History Museum of Los Angeles County 900 Exposition Blvd., Los Angeles 90007 USA rwetzer@gmail.com pentcheff@gmail.com Why is it hard to get systematists to contribute strongly to large online initiatives that are based on taxonomic information (e.g. EOL, CoL, GBIF)?

To succeed, these initiatives must be based on the best current taxonomic science. If they are based on outdated taxonomic information, they will never gain credibility.

The key to getting systematists to participate in an ongoing way is to ensure that *the information that systematists retrieve from online systems must be better than the information already on their desk.* Without that, there is little incentive for a systematist to invest the time to put information into a system and keep it updated.

Why is the information retrieved from online systems (often) not seen as adequate for research-level work in systematics?

WHAT WORKS FOR SYSTEMATISTS?

With traditional scholarly publications, systematists both incorporate information from them and actively generate them.

Why?

Visibility of the scholarly trail of change.

As an example, this is a fragment of text from a taxonomic publication¹ changing the diagnosis of a genus. It provides information that per-

In spite of the shortcomings of the characters discussed above, it is possible to redefine *Palaemon* around the second and third groups of species and include the following two species.

Palaemon Weber, 1795
Palaemon Weber, 1795: 94.—Holthuis,

WHAT DOESN'T WORK FOR SYSTEMATISTS?

000	ITIS Standard R	eport Page: Palaemon			
 <th>The service of the se</th><th>/let/SingleRpt/SingleRpt</th><th>^ Q</th><th></th><th></th>	The service of the se	/let/SingleRpt/SingleRpt	^ Q		
Google Calendar DN	IA Interactive				
ITIS 🛛			. Onlarit Bata	Tests	
	Home	About Data Data Acces	s Sudmit Data	TOOIS	commen

Palaemon <u>Weber, 1795</u> Taxonomic Serial No.: 96449

Download data Download Palaemon TSN 96449

Taxonomy and Nomenclature

Kingdom:	Animal
Taxonomic Rank:	Genus
Synonym(s):	
Common Name(s):	

Taxonomic Status: Current Standing: valid

Data Quality Indicators: Record Credibility Rating: verified - standards met Information retrieved from online repositories is designed to reflect the most recent version. Information about *what* changed, *who* changed it, *when*, and *why* is often not available (and often not even recorded).

This example from ITIS shows that there has

mits the reader to trace the scholarly history of the change.

¹Walker, T.M. and G.C.B. Poore (2003) Rediagnosis of *Palaemon* and differentiation of southern Australian species (Crustacea: Decapoda: Palaemonidae). *Memoirs of Museum Victoria* 60(2): 243-256.

1950: 42–44 (extended diagnosis).— Holthuis, 1993: 112–114 (synonymy).

Diagnosis. Rostrum well developed, toothed dorsally and ventrally, without an elevated basal crest; upper margin bearing single row of setae between dorsal teeth. Carapace smooth....

The information has credibility because this publication (and those referenced by it) contain the tools that let the reader trace the changes in the treatment of the genus name through time.

Global Species unknown Completeness: Latest Record Review: 2004

been some curation of the information about this genus. However, it is

not possible to determine who made changes, what changes have been made through time, and why any of the changes were made.

From the perspective of a systematist doing research, this information has little credibility because there is no way to trace the changes that have been made.

WHAT'S NEEDED?

Every record of taxonomically important information must have a detailed log of changes.

Our experience with the Decapod Assembling the Tree of Life project (http://decapoda.nhm.org) illustrates the value of this principle.

Our amalgamated collection of decapod systematics references is being well received by systematists in large part because of its transparency.

000	Decapoda AToL::Detailed Reference Information		
	tp://decapoda.nhm.org/references/referenceinfo.html?refid=1 🏠 🔻 🕞 🕻 Google	Q	
🔮 Decapoda AToL::Search Referen 🤅	Decapoda AToL::Detailed Refer 🛞		Ę
Assembling the Tree of Life	Home Project Literature Glossary People Outreach	IAAAI	
	Detailed Reference Information		
	Detailed Reference information		
 Problem, comm Have you a problem or Have you a PDF to uplo 	comment for this reference?		

Thank you!

Detailed information for reference 11670

Henderson, J.R. (1888) Report on the Anomura collected by H.M.S Challenger during the years 1873-1876. In: Thompson, C.W. and J. Murray (eds.) Report of the Scientific Results of the Voyage of H.M.S. Challenger During the Years 1873-76 under the command of Captain George S. Nares, R.N. F.R.S. and the late Captain Frank Tourle Thompson, R.N. Vol. 27. Pp. 1-221. PDF is 9.0MB

Credibility comes from a visible scholarly trail of change.

When change information is intrinsically integrated with data records, amalgamated data repositories will become potential places where scholarly work can happen.

Once a record is submitted to the project, all future changes are documented, allowing researchers (including the original contributor) to see and evaluate their credibility.

No more undocumented changes.

Certifica	tion infor	mation	Change l		
		Checked secondary references Checked the Challenger summary	2009-04-22	N.D. Pentcheff	Removed now-unused "69" from "issue" field
2008-09-31	N.D. Pentcheff	volume, where there's a clearer explication of how Parts and	2009-00-19	N.D. Pentcheff	Fix title typo (Thompson's name)
2008-08-22	N.D. Pentcheff	Volumes are arranged. Viewed paper/PDF original http://www.19thcenturyscience.org /HMSC/HMSC-Reports/Zool- 69/htm/doc.html	2008-09-31	N.D. Pentcheff	Realized that "Volume" printed on the Challenger books is really "Part". The volume is different. See the summary volume of the Challenger Reports for a listing.
2008-08-22 N.D. Pentcheff Fix volume Rearrange parts					
			2007-05-30	R. Wetzer	secondary title
eferenc	e record o	details			
	Reference	ID 11670			
	Reference tvi	booksection			