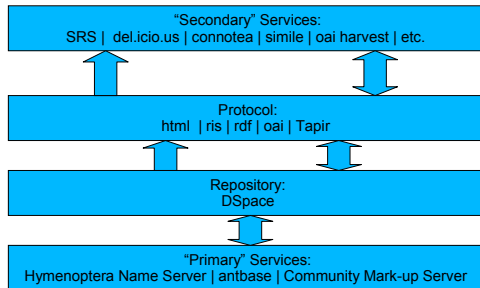
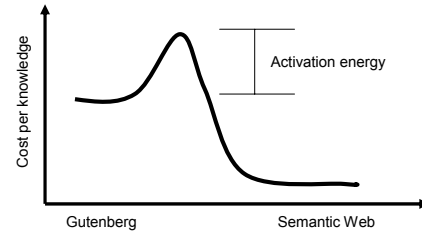


Plazi.org: Using DSpace as a Repository of Species Descriptions

PLAZI.ORG

- Repository for stable, persistent access to digitized taxonomic literature
- Integrated with tools for creation and enhancement
- Facilitate external services to draw data from repository
- Catalyst for the shift to digital enhanced scientific communication
- Provide tools to overcome the inherent transitional costs of including legacy publications into rapidly growing semantic Web environment



Rationale

- Use DSpace to serve as "third party" repository/depository
- Provide stable, persistent locations for species descriptions through identifiers for publications and treatments
- Enhance publications by refining the granularity to improve access to content
 - species names
 - specimens (geographic names and collecting events)
 - bibliographic references
 - images
 - gene sequences
- Expose data to external services via variety of channels

Taxonomic Literature

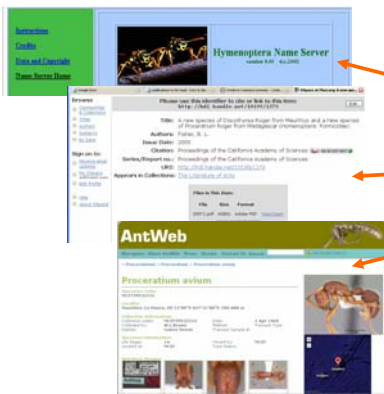
- Formal descriptions of species
- Quasi legal documents
- Species naming governed by international codes requiring both publication and citation of prior descriptions
- Rich source of data potentially beneficial to many domains (e.g., Conservation)
- Demands Open Access
- Scope: description of 1.8M species, >100M published pages, 22,000 new descriptions/year; current scope of plazi: >12,000 species, 3,400 publications, 150 enhanced xml versions

Proceratium avium Brown, 1974
Figs. 5-13.

Proceratium avium Brown, 1974: 71, figs. 1 and 2 (worker, gyne and male); Mauritius: Le Pouce Mt., 700-800 m, Native forest, 1 Apr. 1969 (coll. W.L. Brown) [examined] AntWeb MCZTYP32216 (MCZC) [de Andrade 2000:75].

Proceratium avioide de Andrade 2000: 78, figs 37, 38 (worker, gyne and male); Mauritius: Le Pouce Mt., 700-800 m, Native forest, 30 March 1969 (coll. W.L. Brown) [examined] AntWeb MCZTYP35017 (MCZC). New synonymy [see justification below].

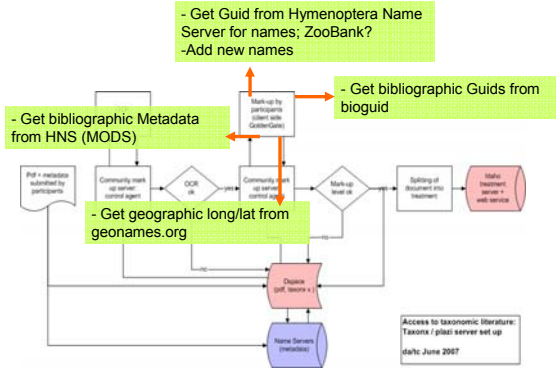
During the trip to Le Pouce on May 25 and 30, seven new collections of *Proceratium* from Le Pouce were recorded (Table 2). Because of the small size of the forest patch, only two complete colonies were collected. For the other colonies we encountered, only a few foragers were removed. As Brown (1974) observed, foragers were returning to nests with what appeared to be spider eggs. In this case, they carried the eggs in the mandible, and did not support the eggs with the recurved gaster (Brown 1980). Baroni and de Andrade (2003) suggest the recurved gaster serves a phragmotic function, but I did not observe the recurved gaster being used to plug up the ant nest entrance.



```

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  <tax:figures>Figs. 5-13.</tax:figures>
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  <tax:div type="discussion">
    <tax:p><tax:source source="AntWeb" identifier="AntWeb MCZTYP35017 (MCZC) [de Andrade 2000:75]"/> During the trip to Le Pouce on May 25 and 30, seven new collections of <tax:name>Proceratium</tax:name> from Le Pouce were recorded (Table 2). Because of the small size of the forest patch, only two complete
  </tax:div>
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```

Workflow



- A workflow has been established to involve the community to create enhanced publications
- Digital documents submitted to DSpace at Plazi.org
- Community Mark-up Server creates XML TaxonX-XML document using GoldenGate as advanced editor, and added to the respective DSpace items.
 - Identifiers are found for scientific names, bibliographic references
 - New names are entered into dedicated Name Servers (Hymenoptera Name Server and Zoobank)
 - Georeferencing of locations
- Idaho Search and Retrieval Server imports the TaxonX-XML documents into Postgres-DB, builds indices and provides search capabilities
- Data is exposed via OAI and TAPIR protocols and pushed to services such as Antweb, Ispecies, connota, del.icio.us, etc.