

Plazi: persistent and openly accessible digital taxonomic literature

Donat Agosti & Terry Catapano
Plazi

<http://plazi.org>

SIB Text Mining for Biology Meeting
June 4, 2015



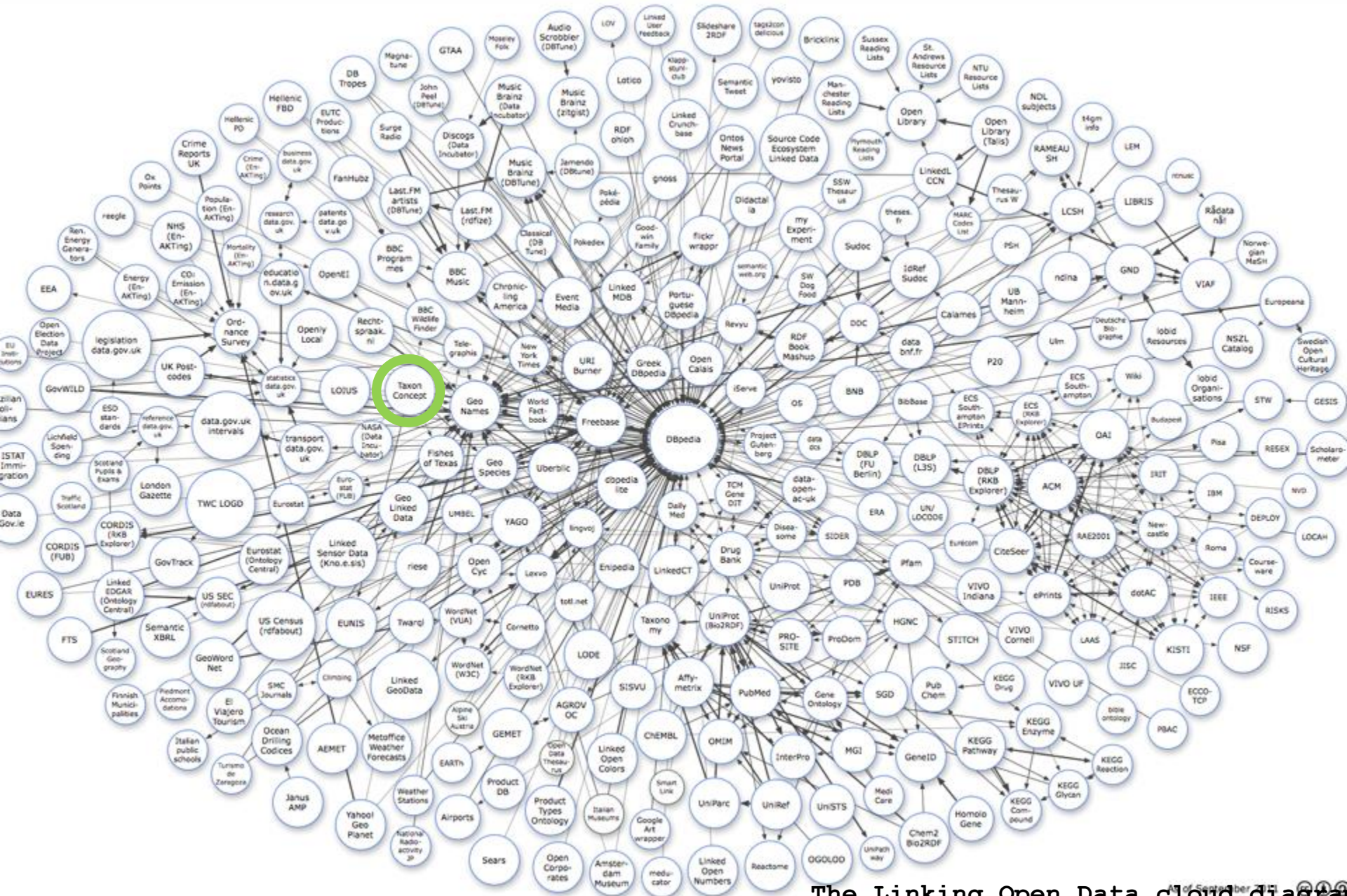
PLAZI 
taking care of freedom

- Swiss based international NGO and SME
- Founded in 2008
- Mission to foster (Open Access) Linked Open (scientific) Data
- EU, industry, and volunteer support
- Membership global



PLAZI 
taking care of freedom

Build as catalyst a TreatmentBank that includes direct access to 1 million citable treatments and data, related metadata and digital copies of the source publications






Five pillars:

 Legal advice

 technical innovations and solutions

 maintenance of a treatment repository and
Biowikifarm

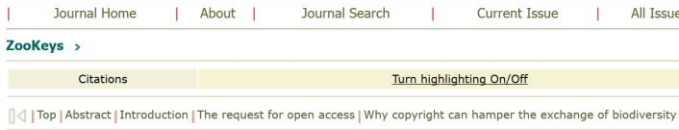
 consultancy and services

 advocacy



Taxpub (together with NIH/Pensoft)	TaxonX
DTD	Schema
Prospective publications	Legacy publications
Constraint	loose
Derivative of JATS	independent
Self-contained	Allows import of other schemas

Publication, one of our footprints



ZooKeys 414: 109–135, doi: 10.3897/zookeys.414.7717

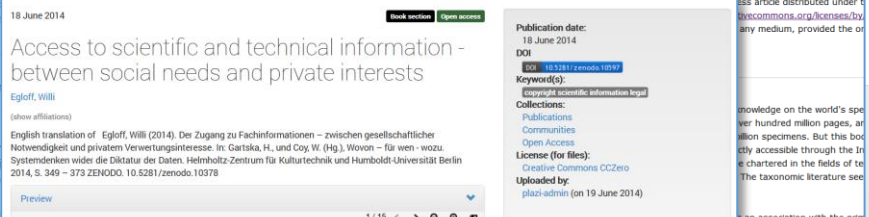
Open exchange of scientific knowledge and European copyright: The case of biodiversity information

Willi Egloff¹, David J. Patterson¹, Donat Agosti¹, Gregor Hagedorn^{1,2}

1 Plazi, Zinggstrasse 16, 3007 Bern, Switzerland
2 Museum für Naturkunde Berlin, Invalidenstraße 43, 10785 Berlin, Germany

Corresponding author: Willi Egloff
Academic editor: L. Perceval
Received 13 April 2014

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BOUCHOUT DECLARATION

DECLARATION BACKGROUND FAQs SIGNATORIES SIGN

The Bouchout Declaration for Open Biodiversity Knowledge Management

The purpose of the Bouchout Declaration is to help make digital data about our biodiversity openly available. It offers members of the biodiversity community a way to demonstrate their commitment to open science.

Declaration

As signatories, we encourage an overarching approach to Open Biodiversity Knowledge Management which is based on the following fundamental principles: [...]

[read more](#)

News

The latest news and announcements covering the Declaration. [...]

[read more](#)

Sign

Your signature is your commitment to an Open Biodiversity Knowledge Management system that will provide direct access to research data.

[sign now](#)

PLAZI

taking care of freedom

- Projects
- Blue List
 - Liste Bleue
 - Bouchout Declaration
 - Taxon Search Portal
 - GoldenGATE Editor
 - TaxonX Schema
 - TaxPub
 - Join us!
 - lectures

The Blue List

The Blue List: elements of taxonomic information that are not subject to copyright.

One impediment to open sharing of biological content is uncertainty as to whether and how intellectual property rights apply to biodiversity information. To clarify the situation, and in collaboration with the Global Names project, Plazi organized a workshop in Tempe, Arizona in April 2013 in which we brought together providers and users of taxonomic information, data managers, and Intellectual Property Rights lawyers from Europe and the USA. The perspectives of interested parties were submitted via a SNARL (Scientific Names Attributes, Rights and Licensing) wiki. The outcomes of the workshop were published as Patterson, D. J., Egloff, W., Agosti, D., Eades, D., Franz, N., Hagedorn, G., Rees, J. A. and Remsen, D. P. 2014. Scientific names of organisms: attribution, rights, and licensing BMC Research Notes 7:79. doi:10.1186/1756-0500-7-79. Copyright is not applicable to facts or those elements that are normally included in taxonomic sources. The 'blue list' identifies those elements of scientific publications, databases, monographs, classifications, checklists etc. to which copyright does not apply, and that can be re-used without permission. Permission will be required if a data-use agreement is in place and agreed to by both parties; and all users are reminded that it is appropriate to inform the sources of any re-use and to provide appropriate credit to sources.

- A hierarchical organization (= classification), in which, as examples, species are nested in genera, genera in families, families in orders, and so on.
- Alphabetical, chronological, phylogenetic, palaeontological, geographical, ecological, host-based, or feature-based (e.g. life-form) ordering of taxa.
- Scientific names of genera or other uninominal taxa, species epithets of species names, binomial combinations as species names, or names of infraspecific taxa; with or without the author of the name and the date when it was first introduced. An analysis and/or reasoning as to the nomenclatural and taxonomic status of the name is a familiar component of a treatment.

User login

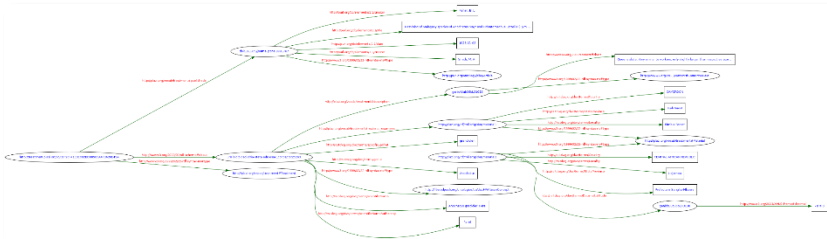
Username: agosti
Password: *****
[Log in](#)

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Our dream: Giant Global Species Graph



500 M
pages



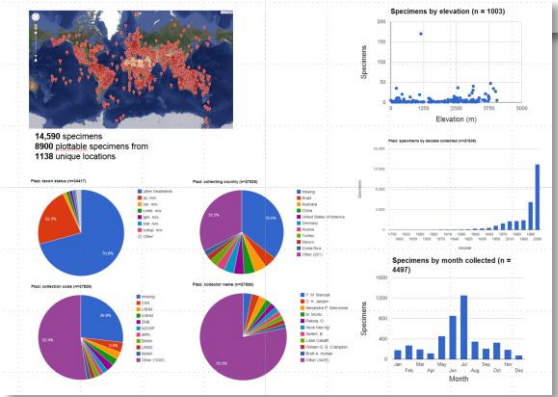
Legal
Social
Technical
Ontologies
Infrastructure

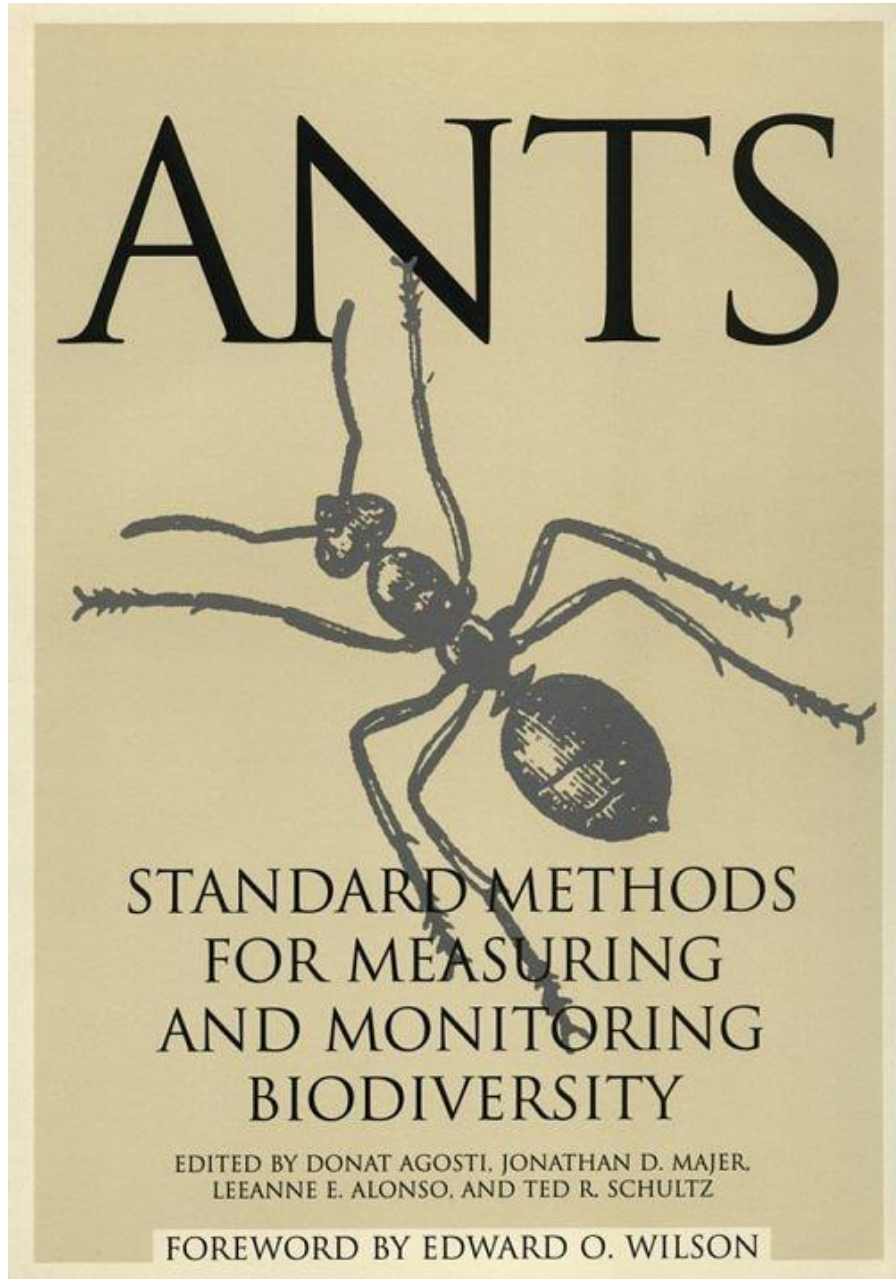
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14,590 specimens
8900 plantable specimens from
1138 unique locations.





Compare biodiversity over space,
time, collector, habitat

What organism is it?
What do I know about it?
Where does it live?

The origin

Idea
1995/2000



Online catalogue

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Published online 14 March 2002 | Nature | doi:10.1038/news020311-9

News

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Formidable catalogue puts army of ants online.

[Tom Clarke](#)



Researchers can now crawl through data on 11,000 ant species.

© Antbase

After four years of cooperation and tenacity worthy of their quarry, ant experts have completed Antbase, a centralized, online information resource cataloguing all 11,000 known species of ant.

Its creators hope that Antbase will one day become the ant equivalent of GenBank, the public database of genetic sequence data, and a boon not just for ant specialists, but for entomologists and ecologists of every kind.

Ant taxonomists Donat Agosti of the American Museum of Natural History in New York and Norman Johnson of

Ohio State University in Columbus built Antbase using funds from general research budgets and small institutional grants. Having compiled a full list of ant names, they hope their homespun project will now win long-term funding and a permanent home. "It needs to be institutionalized," says Agosti.

Recent activity

most recent

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Before antbase.org, Harvard's Museum of Comparative Zoology could claim to be the only location with a complete set of ant systematics publications from 1758 - present.



Through antbase.org's digital library, access to this body of literature is worldwide, and it is actively used (>10,000 visits in one month only).

109775 visits from 28 Aug 2006 to 29 Aug 2007
' distance in which individuals are clustered
Total number of visits depicted above = 109457
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Access, archive, DOI

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catapano@plazi.org

30 June 1992

Book Open access

Revision of the ant genus *Myrmoteras* in the Malay Archipelago (Hymenoptera, Formicidae)

Agosti, Donat

(show affiliations)

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Preview

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Biodiversity Literature Repository

Accept Reject

Publication date:

30 June 1992

DOI

DOI 10.5281/zenodo.10693

Keyword(s):

systematics, biology, taxonomy, Oriental Region, Myrmoteras, revision

Published in:

Revue Suisse de Zoologie: 99 (1992) pp. 405-429

Collections:



Free text or DOI

Simple search

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Author(s)

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Title

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Advanced search

CrossRef

DataCite

PubMed

RefBank

BHL articles

BHL books

Mendeley



CrossRef Advanced requires Author, 'Published in' and (Year or Title).
BHL requires at least Author or Title. BHL books uses only last names.



The special case taxonomic literature: The cited elements are treatments, not article

Treatment: a well defined part of an article that defines the particular usage of a scientific name by an authority at a given time (a page(s) in a publication).



From article to treatment

Online catalogue
Open access
Online library
«Linked data»
2004



Hymenoptera Name Server
version 1.5 19.xii.2007

Results for the species *Anochetus Grandidieri* Forel:

Classified in: Vespoidea: Formicidae: Ponerinae: Ponerini: *Anochetus*

Status of name: Invalid, Original name/combination

Valid name: *Anochetus grandidieri* Forel

Date of description: 1891

Described by: Forel, page(s) 108.

Citation of original description:

- [Forel, A.](#) 1891. Histoire naturelle des hyménoptères. Les formicides. Histoire Physique, Naturelle et Politique de Madagascar 20(2): 1-280.

HYMENOPTERA ONLINE (HOL)

The order Hymenoptera contains some 115,000 species and millions of specimens in collections around the world. Our goal is to provide access to these data. Some parts of this database have extensive information available (e.g., Proctosporinae, Polysteginae, Campoplexinae, Apoidea), even to the level of specimens (see that over index: [Hymenoptera: Formicidae](#)).

The underlying database was first developed by [G. Bouček](#), [J. Bouček](#) and [J. Černý](#), with later contributions by [Joe Cunn](#). The HOL data portal was designed and implemented by [Joe Cunn](#). The data themselves have been gathered with the collaboration of a number of colleagues. A number of links still need work. HOL is no longer solely dedicated to Hymenoptera but recent acquisitions have expanded the taxonomic scope of the resource to include Ichneutinae, Cynipidae, Hymenoptera, and others with the help of a number of tireless collaborators. If you would like to contribute to the further development and enhancement of this resource or need technical assistance related to Hymenoptera Online services, please contact [HOL Help](#), [Hymenoptera](#) or the [HOL](#) Google Page.

Search for taxa, collections, authors, collectors and specimens by typing your simple query in the text box below. Taxon name searches are case-sensitive and a wildcard (*) will automatically be appended to the end of your query (e.g. *Trichurus*). The same applies to collectors and authors (e.g. *smith*), collections (e.g. *CICT*), genera (e.g. *Smith*), journals (e.g. *Hymenoptera*), and specimen searches by specimen ID (e.g. *ASIC 20.2.2*).

If you would like to see a list of new features, recent changes and recent additions to Hymenoptera Online, visit the [HOL Google](#) Page. For basic site statistics and archived updates, browse the [updates](#) page. Visit the [collection page](#) for the C.A. Triplehorn Insect Collection at the Ohio State University for information on its primary and secondary type holdings as well as database links to the collection.

Search:

Reference: Forel, 1891. Histoire naturelle des hyménoptères. Les formicides. Histoire Physique, Naturelle et Politique de Madagascar 20(2): 1-280 - view extended reference

Pages: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280

Current: < 108 > "

108	MADAGASCAR.
	2. ANOCHETUS GRANDIDIERI, n. sp.
	(Pl. III, fig. 9, 9', 9" et 9'.)
	<p>♂. Longueur 4 mill. Voisin des <i>A. rectangularis</i>, Mayr, et <i>A. Mayri</i>, Émery, dont il est du reste facile à distinguer. Mandibules à bord interne sans trace de dentelures, passant presque sans angle à la dent terminale supérieure. Elles se terminent par deux dents très courtes et très obtuses (cependant il est possible que ce soit l'effet de l'usure chez l'exemplaire unique, et que chez les jeunes ♂ les dents soient longues et pointues. Dans ce cas, il se pourrait qu'il existe une troisième petite dent médiane se détachant de la dent inférieure vers son milieu, comme chez</p>

Treatment citation

Treatment



Hymenoptera Name Server

version 1.5 19.xii.2007

Results for the species *Anochetus*

Classified in: Vespoidea: Formicidae: Ponerinae

Status of name: Invalid, Original name/combination

Valid name: *Anochetus grandidieri* Forel

Date of description: 1891

Described by: Forel, page(s) 108.

Citation of original description:

- [Forel, A.](#) 1891. Histoire naturelle des hyménoptères de Madagascar. Histoire Physique, Naturelle et Politique de Madagascar, 10: 108.



HYMENOPTERA ONLINE (HOL)

Hierarchy: [Hymenoptera](#) > [Vespoidea](#) > [Formicidae](#) > [Ponerinae](#) > [Ponerini](#) > [Anochetus](#) > [Anochetus grandidieri](#)

(**Anochetus Grandidieri*)

General Information

Synonyms (2) show fossils:

Taxon	Status	Relationship Type
<i>Anochetus grandidieri</i> Forel [?]	Subsequent name/combination	Present combination
<i>Anochetus madecassus</i> Santschi [?]	Original name/combination	Junior synonym

Literature (8) show synonyms: show all annotations: view type: annotation-view bibliography-view

Filter

Authors:

- ▶ *Anochetus Grandidieri* Forel, 1891: 108. Original description, placed in subgenus *Ponera* (*Ponera*).
- ▶ *Anochetus grandidieri* Forel: Dalla Torre, 1893: 48. Cataloged.
- ▶ *Anochetus grandidieri* Forel: Emery, 1911: 109. Cataloged, placed in subgenus *Anochetus* (*Anochetus*).
- ▶ *Anochetus grandidieri* Forel: Wheeler, 1922: 1013. Cataloged, distribution.
- ▶ *Anochetus grandidieri* Forel: Wheeler, 1922: 791. Cataloged, distribution.
- ▶ *Anochetus grandidieri* Forel: Brown, 1978: 557, 564, 571, 606. Description, listed, synonymy, placed in *grandidieri* group, keyed, distribution.
- ▶ *Anochetus grandidieri* Forel: Bolton, 1995: 64. Cataloged.
- ▶ *Anochetus grandidieri* Forel: Fisher & Smith, 2008: 4, 8, 5c, 8b, figs .3a-3j, map6b. Description, keyed, lectotype designation, distribution.

▶ NCBI (445)

One name



Many name(s) usages



Text

Semantically enhanced text (TaxonX)

RDF

5*
2014

Mystrium leonie Böhlin & V...
Fig. 4–6, 11, 14

Type material. HOLOTYPE
E, 750m a.s.l., December 2

Measurements and in
2.50, PW 1.18.

Diagnosis (worker). T...
the apex of each mandible
goreticulum; maxillary pal
(first) and third segment, s
broadened in its distal part

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Linking of treatments to external resources

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Back to Search Form

Anochetus boltoni Fisher

Publication Data, Additional Information (status, external links, etc)

citation of original description	Fisher, B. L. & Smith, M. A., 2008, A revision of Malagasy species of Anochetus Mayr and Odontomachus Latreille (Hymenoptera: Formicidae), <i>PlosOne</i> (3), pp. 1-23: 4
publication ID	21401
link to original	http://hdl.handle.net/10199/15447
additional text versions	Plain XML TaxonX
scientific name	Anochetus boltoni Fisher
status	sp. nov.
description page, figures	
external databases	ZBK HNS
distribution map	GoogleMaps

Treatment

Anochetus boltoni Fisher ZBK HNS sp. nov.

urn:lsid:zoobank.org:act:B6C072CF-1CA6-40C7-8396-534E91EF7FBB

Type Material: Holotype worker, MADAGASCAR: Antsiranana, Parc National de Marojejy, Mantadia River, 28.0 km 38° NE Andapa, 2.2 km 33° NNW Manakara, 14°26'12"S, 049°46'30"E, 450 m, silt forest, rainforest, 12-15 Nov 2003 (coll. B. L. Fisher et al.), comma collection code: BLF08995 pin code: CASENT0487895 CASC CASC1 CASC2 CASC3 CASC4

Paratype: worker, Madagascar: Antsiranana, Parc National de Marojejy, Mantadia River, 28.0 km 38° NE Andapa, 2.2 km 33° NNW Manakara, 14°26'12"S, 049°46'30"E, 450 m, silt forest, rainforest, 12-15 Nov 2003 (coll. B. L. Fisher et al.), comma collection code: CASENT0487895 CASC CASC1 CASC2 CASC3 CASC4

Other material: holotype worker, Madagascar: Antsiranana, Parc National de Marojejy, Mantadia River, 28.0 km 38° NE Andapa, 2.2 km 33° NNW Manakara, 14°26'12"S, 049°46'30"E, 450 m, silt forest, rainforest, 12-15 Nov 2003 (coll. B. L. Fisher et al.), comma collection code: CASENT0487895 CASC CASC1 CASC2 CASC3 CASC4

COI barcode from paratype collection and coded CASENT0487895-D01 CASC



ZooBank
The Official Online Registry for Zoological Nomenclature

urn:lsid:zoobank.org:act:B6C072CF-1CA6-40C7-8396-534E91EF7FBB

TimeStamp: 2008-01-07T02:33:39.717 Registered by: Richard L. Pyle

Anochetus boltoni Fisher in Fisher & Smith 2008

Fisher, Brian L., & M. Alex Smith, 2008. A revision of Malagasy species of Anochetus Mayr and Odontomachus Latreille (3): 1-23.

Act Type: Original Description
 Rank: Genus
 Epithet: boltoni
 Full Name: Anochetus boltoni
 Authorship: Fisher in Fisher & Smith

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Hymenoptera Name Server
version 1.7 (Feb 2007)

Results for the species *Anochetus boltoni* Fisher:

Identified by: Vitoriano Francisco Bruesler, *Anochetus boltoni*
 Name of name: "id", Original author/authority: Fisher in Fisher & Smith 2008
 Date of description: 2008
 Described by: Fisher, Brian L. & Smith, M. A.
 Circum of original description: Fisher, B. L. & Smith, M. A., 2008. A revision of Malagasy species of Anochetus Mayr and Odontomachus Latreille (Hymenoptera: Formicidae), *PlosOne* (3): 1-23: 4.

Diagnosis of valid name:
 - None yet recorded in database

The valid name and its synonyms have been cited as:
 - Anochetus boltoni Fisher

Have references for the Family Formicidae:
 - Fisher, B. L.

Additional information:
 Species Authority: Fisher & Smith
 Other options: [Help](#) [FAQ](#)

AntWeb

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Anochetus boltoni

Accession ID: INV108542

Specimen Information: **BLF08995** BLF08995 rainforest

Date: 16 Nov 2003
 Method: 21x25 mm cotton bag
 Transect Type: Transect Sample #:

Image Information: 16 Images
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EF610890 Reports Anochetus sp. Mad-02 [14837423]

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 DEFINITION Anochetus sp. Mad-02 cytochrome oxidase subunit 1 (COI) gene, partial cds; mitochondrial.
 ACCESSION EF610890
 REFERENCE EF610890.1 GI14837423
 KEYWORDS mitochondrial Anochetus sp. Mad-02
 ORGANISM Anochetus sp. Mad-02
 Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota; Neoptera; Endopterygota; Hymenoptera; Apocrita; Aculeata; Vespoidea; Formicidae; Pompilinae; Ponerini; Anochetus.

REFERENCE Smith, B.L. and Fisher, B.L.
 TITLE A Revision of Malagasy Species of Anochetus Mayr and Odontomachus Latreille (Hymenoptera: Formicidae)
 JOURNAL PLoS ONE 3 (5): e1797 (2008)
 REFERENCE 2 (bases 1 to 657)
 AUTHORS Smith, B.L. and Fisher, B.L.
 TITLE Direct Submission
 JOURNAL Submitted (07-MAY-2007) University of Guelph, Biodiversity Institute of Ontario, 579 Gordon Street, Guelph, Ontario N1G 2W1, Canada

FEATURES
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2014



Different output formats

Anochetus boltoni Fisher

Publication Data, Additional Information (status, external links, etc)

treatment citation	Fisher, B. L. & Smith, M. A., 2008, A revision of Malagasy Mayr and Odontomachus Latreille (Hymenoptera: Formicidae) 23: 4-6
publication ID	21401
link to original citation	http://dx.doi.org/10.1371/journal.pone.0001787
treatment provided by	Christiana
persistent identifier	http://treatment.plazi.org/id/B6C072CF-1CA6-40C7-8396-5
additional text versions	Plain XML TaxonX
scientific name	Anochetus boltoni Fisher HTML
status	sp. nov.
external databases	ZBK HNS
distribution map	GoogleMaps

Treatment

Anochetus boltoni Fisher^{ZBK}HNS sp. nov.

um:lsid:zoobank.org:act:B6C072CF-1CA6-40C7-8396-534E91EF7FBB Figures: worker 2a, 6a

Type Material: Holotype worker, MADAGASCAR: Antsiranana, Parc National de Marojejy, [coordinates](#) 8 km 38 ° NE Andapa [GoogleMaps](#), 8.2 km 333° NNW Manantenina [GoogleMaps](#), 14°26'12"S, 049°46'30"E, 450 litter, rainforest, 12-15 Nov 2003 (coll. B. L. Fisher et al.), comma collection code: BLF08985 pin code: CASENT0104542 (CASC) [GoogleMaps](#)CASC, Paratype. 8 workers with same data as holotype but pins code CASENT0487895 [GoogleMaps](#)CASC, CASENT0487896 [GoogleMaps](#)CASC, CASENT0487897 [GoogleMaps](#)CASC, CASENT0006943. (BMNH, MCZ, CAS) [GoogleMaps](#)CASC, CO1 Barcode paratype collection and coded CASENT0487895-D01 [GoogleMaps](#)CASC

Figure 2. *Anochetus*^{HNS} spp. full face and lateral view. A-B, *boltoni*^{HNS} worker CASENT0104542. C-D, bo male CASENT0063847. E-F, *goodmani*^{HNS} worker CASENT0104543. G-H, *goodmani*^{HNS} ergatoid queen CASENT0454531. doi:10.1371/journal.pone.0001787.g002

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Citing of treatments or linking of treatments to treatments

By minting persistent httpURIs for treatments, treatments can be cited like a bibliographic reference

Pseudomyrmex gracilis (Fabricius 1804)

(Fig. 6)

Formica gracilis Fabricius 1804:405. Lectotype worker, Essequibo, Guyana (ZMUC) [Examined], [View Cited Treatment](#)

Pseudomyrma bicolor Guerin 1844:427. Syntype queen (unique?), Colombia (ZSMC) [Examined] Syn. nov.

<http://treatment.plazi.org/id/A9FFD1FC-4629-FFB4-968F-AD38386521BA>

40. *Formica gracilis*

F. elongata nigra, mandibulis antennis pedibusque rufis, petiolo binodi.

Habitat in America meridionali Dom. Smidt. Mus. Dom. Lund.

Statura parva, tenuis, elongata praecedentium. Caput planum, ovatum, nigrum, antennis mandibulisque fomicatis ferrugineis. Thorax compressus, niger. Abdomen ovatum, petiolo elongato, binodi, basi interdum ferrugineo. Pedes rufi.



Acacia-ant species: *Pseudomyrmex gracili*

Associated ant-acacia: *Acacia gentlei*

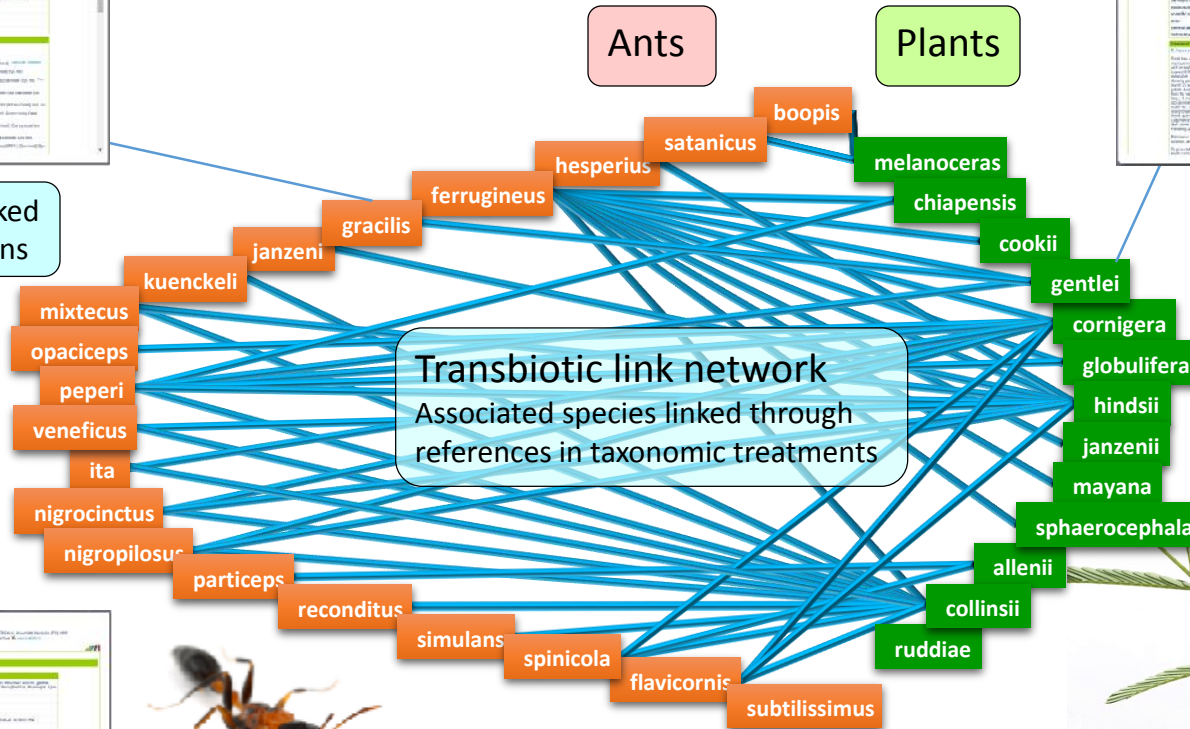
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Treatment



Treatments linked through citations

Transbiotic link network
Associated species linked through references in taxonomic treatments



Pseudomyrmex ants and *Vachellia* ant-acacias are a classic example of mutualism in biology.
Photocredits: Alex Wild



Coremiocnemis tropix , ROBERT J RAVEN

Publication Data, Additional Information (status, external links, etc)	
treatment citation	ROBERT J RAVEN, 2005. A new tarantula species from northern Australia (Araneae, Theraphosidae). Zootaxa 1004, pp. 15-28: 18-27
publication ID	
link to original citation	http://www.mapress.com/zootaxa/2005f/zt01004p028.pdf
treatment provided by	Jeremy
persistent identifier	http://treatment.plazi.org/id/DB0A588D-4CED-9C22-4EBA-D26AD1BE604B
additional text versions	Plain XML TaxonX
scientific name	Coremiocnemis tropix
status	sp.nov.
external databases	
distribution map	GoogleMaps

Treatment

Coremiocnemis tropix sp.nov.

(Figs1-37)

Material examined.

Holotype female, Atherton , 17°16'S, 145°29'E, north-eastern Queensland, Australia, 25May1988, M. Jeansson, QM S6325.

Paratypes: WAM90/1959, 1male, Freshwater Creek at Crystal Cascades, 10km S of Freshwater, 12Jul1986, M. Harvey; WAM 157516, 1male, 1female, Atherton , June 1994, R. Elick, 1female, Table Mt, 10km S Cape Tribulation, 16°09'S, 145°26'E, rainforest, 24Apr1983, G. Monteith, D. Cook, QM S10583; 1female, Gordonvale, 27km SW, 17°01'S, 145°45'E, rainforest, 17Mar1980, N. Clyde Coleman, QM S10590; 1female, Cape Tribulation, 16°05'S, 145°26'E, rainforest, 29Dec1982-8Jan1983, G. Monteith, QM S10598; 1female, Freshwater Creek, Cairns, 16°58'S, 145°43'E, rainforest, under stones, Aug1977, M.T. Bishop, QM S10633; 1female, Mulgrave River, 27km SW Gordonvale, 16°23'S, 143°59'E, 19Mar1980, N. Clyde Coleman, QM S10793; 1female, Crystal Cascades, 16°58'S, 145°42'E, rainforest, sheet web, 24Aug1980, M. Harvey, QM S20889; 1male, Cairns 16°55'S, 145°46'E, house, S-Sep1995, Stella Jeffery, QM S30136; 1male, Kuranda 16°49'S, 145°38'E, house, 1Aug1991, G. Monteith, QM S25471; 1female, Cairns 16°55'S, 145°46'E, 24Apr2001, A. Hunt, QM S55051; 1female, Earlville, 16°57'S, 145°44'E, Nov1986, Safeway Pest Control QM S6685; 1male, 1female, Mission Beach, 17°56'S, 146°05'E, May1981, E. Long, QM S10650; 1male, Clifton beach, 16°46'S, 145°40'E, 28May1992, QM S20388; 1male, Smithfield, Cairns, 16°51'S, 145°43'E, spider bite, 2May1996, P. Hawkins, QM S29732; 1male, Kurrimine Beach, 30km S Innisfail, 17°47'S, 146°06'E, spider bite, July1997, via R. Piper, QM S34638. All in north-eastern Queensland, Australia.

Other material examined: 1juvenile, Noah Creek, Cape Tribulation,

16°08'S, 145°26'E, rainforest, 16Oct1980, G. Monteith, QM S10592; 1penultimate male, Cape Tribulation, 2km WNW(Site2), 16°05'S, 145°28'E, rainforest, 23Sep-7Oct1982, G. Monteith, D. Yeates, G. Thompson, QM S10593; 1penultimate male, Babinda, 17°21'S, 145°56'E, hospital, QM S10610; 1penultimate male, Cape Tribulation, 16°05'S, 145°26'E, rainforest, 22Sep-7Oct1982, Qld Naturalists Club, QM S10630; 1juvenile, Mt Hartley, 15°46'S, 145°20'E, rainforest, 6Nov1974, V. Davies, J. Covacevich, D. Joffe, QM S10632; 4penultimate males, Cape Tribulation, 16°05'S, 145°26'E, rainforest, under logs and rocks, 15-19Aug1975, W. and J. Nash, QM S10640; 3penultimate males, Crystal Cascades, 16°58'S, 145°42'E, rainforest, Feb1979, N. Clyde Coleman, QM S10792; 1penultimate male, Cape Tribulation, 16°05'S, 145°26'E, rainforest, 26Aug1988, T. B. Churchill, QM S11216; 1juvenile, Cairns, Brinsmead, 16°55'S, 145°46'E, 4May1989, P. Blackman, QM S15278. All in north-eastern Queensland, Australia.

Diagnosis: Differs from both *C. cunicularia* (Simon 1892) and *C. valida* Pocock 1895 in the absence of the very long brushes on metatarsi IV (Figs 1, 18) and in the less extensive maxillary lyræ (Figs 14, 23).

FIGURE 1. *Coremiocnemis tropix* sp. nov., female, habitus. Cape Tribulation. Photo: B. Cowell

Etymology: An arbitrary combination of letters phonetically like tropics, the origin of the spider.

Common Name: Tropix.

Holotype Female QM S6325

Description (measurements in mm):

Carapace 11. long, 8.7 wide, chelicerae 5.5. Legs (femur, patella, tibia, metatarsus, tarsus, total): I: 8.0, 5.0, 6.0, 4.3, 2.8, 2.6, 1.1; II: 6.4, 4.2, 4.5, 3.9, 2.6, 2.1; III: 5.8, 3.5, 3.5, 4.2, 2.5, 1.9; IV: 7.7, 4.0, 5.7, 6.6, 3.3, 2.7. Palp 5.5, 3.3, 3.5, 3.5, 15.8. Midwidths femora I, II, IV = 1.65, III = 1.90; tibia I-IV, 2.1, 1.75, 1.75, 1.65. Abdomen 12.7 long, 7.2 wide. Spinnerets: PMS, 3.50 long, 0.55 wide, 1.10 apart with sclerotised (but less hirsute than venter) cuticle to anal tubercle, PLS, 6.0 basal, 4.2 middle, 6.0 distal, midwidths 1.0, 1.0, 0.75, respectively.

Carapace length to width 1.28; uniform red brown; uniform cover of long white wavy hairs, no setae or thorns.

FIGURES 2-9. *Coremiocnemis tropix* sp. nov., holotype female (2-4, 8-9); QM S10650 (5-7); 2 Carapace dorsal view, 3 abdomen, dorsal view, 4 eyes, dorsal view, 5 ectal cheliceral face, ventral view showing pins, 6 prolateral cheliceral face showing peg setae (inset: detail), 7 cheliceral furrow, ventral view showing smaller basal teeth, 8 Tarsus IV, ventral view, with dividing setae, 9 Tarsus IV, dorsal view, showing tarsal weakness. Scale bar = 2mm for 2, 3, 8-9, all others 1mm.

Eyes: ratio of group width to length 2.11, PLE clearly smaller than ALE but clearly bigger than PME, AME = ALE (Figs 2, 4).

Maxillae (Fig. 14) posterior ventral edge gently rounded for length, retro-face mostly pallid, smooth, glabrous. Cuspules ca. 200 in anterior corner in square region (Figs 11, 22). Posterior edge near heel straight or slightly concave.

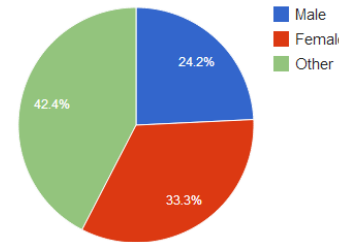
FIGURES 10-19. *Coremiocnemis tropix* sp. nov., female, holotype (10-13, 15-19); QM S10650 (14) 10 Sternum, maxillae, labium and coxae, ventral view, 11 Sternum, proximal maxillae and labium, ventral view, 12 female genital fold, ventral view, 13 labium, ventral view, 14 maxilla, prolateral view, showing lyræ, 15 tarsus IV, lateral



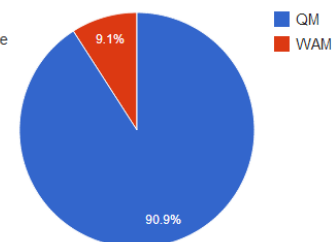
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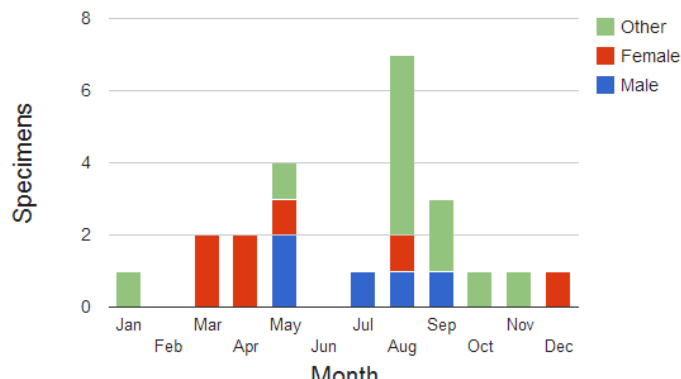
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Specimens by collection (n=33)



Specimens by month collected (n = 33)



Etymology: An arbitrary combination of letters phonetically like tropics, the origin of the spider.

Common Name: Tropix.

Holotype Female QM S6325

Description (measurements in mm): Carapace 11, long 8, wide chelicerae 5.5. Legs (femur, patella, tibia, metatarsus, tarsus total): I: 8.0, 5.0, 6.0, 4.3, 2.8, 2.6, 1.1; II: 6.4, 4.2, 4.5, 3.9, 2.6, 2.1; III: 5.8, 3.5, 3.5, 4.2, 2.5, 1.9; IV: 7.7, 4.0, 5.7, 6.6, 3.3, 2.7. 0. Palp: 5.5, 3.3, 3.5, 3.5, 1.5, 1.8. Midwidths: femora I, II, IV = 1.65; III = 1.90; tibia I-IV = 2.1, 1.75, 1.75, 1.65. Abdomen 12, long 7, 2 wide. Spinnerets PMS 3, 5.0 long, 0.55 wide, 1, 10 apart with sclerotised (but less hirsute than venter); cuticle to anal tubercle, PLS 6, 0 basal, 4.2 middle, 6.0 distal, midwidths 1.0, 1.0, 0.75, respectively.

Carapace length to width 1.28, uniform red brown; uniform cover of long white wavy hairs, no setae or thorns.

FIGURES 2-9. *Coremiocnemis tropix* sp. nov., holotype female (2-4, 8-9); QM S10650 (5-7). 2. Carapace, dorsal view. 3. Abdomen, dorsal view. 4. Eyes, dorsal view. 5. Ectal cheliceral face, ventral view showing pins. 6. Proteral cheliceral face showing peg setae (inset detail). 7. Cheliceral furrow, ventral view showing smaller basal teeth. 8. Tarsus IV, ventral view, with dividing setae. 9. Tarsus IV, dorsal view, showing tarsal weakness. Scale bar = 2mm for 2, 3, 8-9, all others 1mm.

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Maxillae (Fig. 14): posterior ventral edge gently rounded for length; retro-face mostly pallid, smooth, glabrous. Cuspules ca. 200µm anterior corner in square region (Figs 11, 22). Posterior edge near heel straight or slightly concave.

FIGURES 10-19. *Coremiocnemis tropix* sp. nov., female, holotype (10-13, 15-19); QM S10650 (14). 10. Sternum, maxillae, labium and coxae, ventral view. 11. Sternum, proximal maxillae and labium, ventral view. 12. Female genital fold, ventral view. 13. Labium, ventral view. 14. Maxilla, proteral view, showing lyra. 15. Tarsus IV, lateral view. 16. Spermathecae, ventral view. 17. Claws on leg IV, lateral view. 18. Tibia to tarsus IV, dorsal view. 19. Coxa I, ventral view, showing weak setae proterally. Scale bar = 5mm for 10, 2mm for 11-15, 18-19; 1mm for 16-17.

Maxillary lyra (Fig. 14): overall shape, small, ovoid, ca. 0.6 of mid-maxilla length; ventral edge more or less smoothly and gently convex; outer point asymmetrically rounded point; inner point bluntly truncated; large outer paddles in smoothly uniform curving line, gaps evenly spaced; overall size, central about half length. No brush ventral of lyra. Thick paddle setae in 3 lines centrally then thick pointed start; lyra dorsal edge line relative to midgroove line divergent, ca. 10 basally diverging to 15 distally.

Labium (Fig. 13): over 200 cuspules in band for two-fifths of length anteriorly; cuspules ca. similar in size and number to maxillary. Basal groove shallow, distinct. Labiosternal groove (Fig. 13) not concave, flat with slight (anterior) rise, two separate large sigilla.

Chelicerae: intercheliceral spines basodorsally, ca. 13 larger and 2-4 smaller basally (Figs 6, 37). Ectal lyrate area (Fig. 5) groove glabrous; lyra setae, not apically convergent but parallel, in 3 straight lines of long thick setae, 2 lines of short conform ectally with irregular band of thorns 2-4 deep outside that (Fig. 5).

Sternum (Figs 10-11): profile saddle-like, high at back and front. Posterior angle sharp but not separating coxae IV. Posterior edge easily seen, sloping gradually. Marginal thorns absent. Prostrate hair mat strong, dense, or of grey hairs. Pedicel and sternum edges form clear boundary in elevation and setation, pedicel edge pallid.

FIGURES 20-27. *Coremiocnemis tropix* sp. nov., allotype male. 20. Habitus, dorsal view. 21. Carapace, dorsal view. 22. Sternum, maxillae, labium and coxae, ventral view. 23. Maxilla, proteral view, showing lyra. 24. Tip of embolus, ventral view. 25. Bulb, ventral view. 26. Palp, tibia to tarsus, proteral view. 27. Palp, tibia to tarsus, retrolateral view. Scale bar = 10mm for 20, 5mm for 21, 22, 2mm for 23, 25-27, 1mm for 24.

Sigilla (Figs 10-11): 3 pairs, posterior ca. 2 (1.6-3 across paratypes) lengths apart and only ca. 1 length from margin; middle ca. half size of posterior, within ca. 1 length of margin; anterior clearly present.

Legs: leg I clearly thicker than IV but I subequal to IV. Basifemoral thorns absent on all. Femora I-II proterally with long bushy fine hairs, III distinctly incrassate. Metatarsus I hardly longer than tarsus, less than twice.

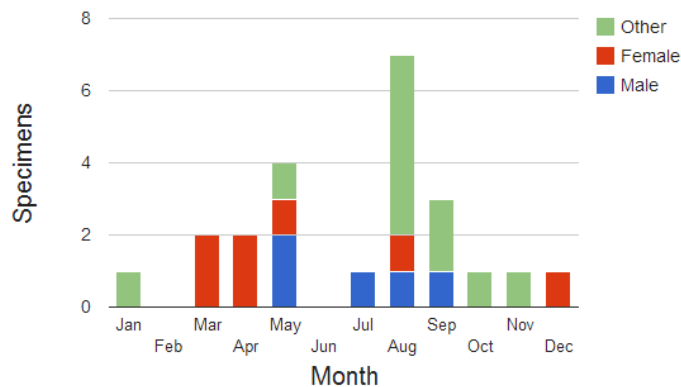
Leg pilosity (number of long hairs extending well above base layer): tibia I p=10-15, d=5-10, r=10-15; metatarsus I p=5-10, r=1-3, v=1-3; tibia IV p=30-40, d=20-30, r=40-50; metatarsus IV p=30-40, d=30-40, r=50-60; tarsus IV ca. 20-40 dorsolaterally on each side. Tuft of blunt-tipped hairs, distoventral metatarsi present at least on IV (Fig. 34). Paired long sensory hairs pointing distad, long gently curved dorsolateral pair basally (0.2 from base) on metatarsi I-IV, long bent (0.5) pair at distal 2/3 on metatarsi I-IV (Fig. 15, possibly widespread); long curving dorsolateral pair at 0.5 (end of very long filiform trichobothria) on tarsi I-IV (Fig. 15). Long downwardly curved hairs (Figs 15, 30) below claw tufts basally with transverse ribbing but apically with discontinuous partially spiralled ribbing (presumably thermosensory in function; viz. Den Otter, 1974). Upper tarsi IV (and presumably I-III) with two other hairs types: closed longitudinal fimbriae (Fig. 35) and differentially dorsoventrally fimbriated hairs (Fig. 36).

Trichobothria (Fig. 33): on tarsi basal filiform field hardly wider than clavate field and merges smoothly; clavates on tarsi I only in distal 2/3; long filiforms only in basal half; shorter filiforms intermixed with clavates distally. Clavate extent on I-IV cf. I only in distal 2/3; long filiforms only in basal half; shorter filiforms for length. Short epitchobothrial hair field (Figs 31-33) on I shorter than clavates and uniform height for length.

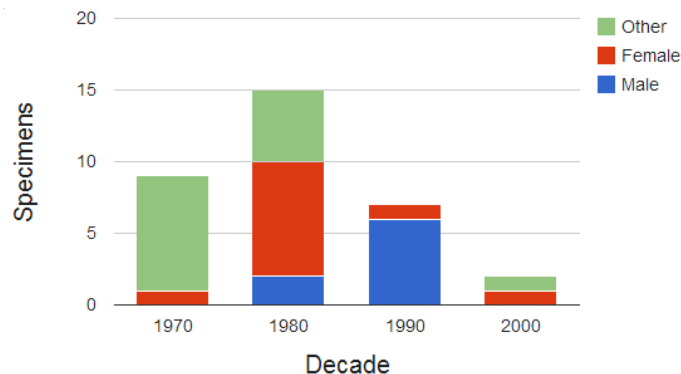
Leg coxae (Fig. 10): no thorns proterodorsally or retrodorsally. Coxal bases dorsally easily seen from above (Fig. 2). I clearly longest, about 1.8 times length of II; IV clearly widest and about as long as III and basally with anterior corner indistinct edge curves dorsally rounded at interface III basally rectangular. Coxae ventrally with short, weak thorns only on proteral faces of I-II (Fig. 19). I-IV ventrally with many long blunt setae but most short, dark and fewer long pallid; ventral surface clearly curving or sloping forward. Retrolateral setation I-III with median narrow light brush; IV glabrous; III-IV with setose mound up from inner corner low mound with few bristles. All retrolaterally lack ventral ledge and ventrally with uniform setation (Fig. 10).

Scopula: entire, dense on tarsi I and metatarsi I-II, on tarsi II entire but with long emergent hairs in central zone, not dividing scopula; on metatarsi III for ca. 0.8-0.9 length, but with uniformly distributed (i.e., not a dividing line) long emergent hairs; on tarsi III entire but with long emergent hairs in central zone but not dividing scopula. For ca. 0.75 length of

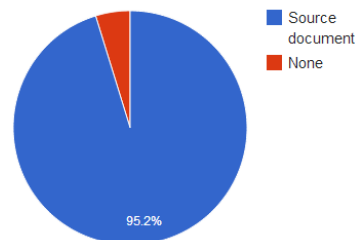
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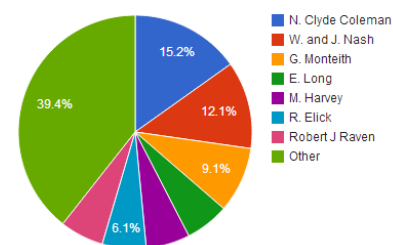
Specimens by decade collected (n = 33)



Coordinate source for collection locations (n=21)



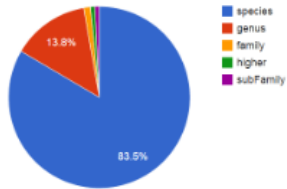
Specimens by collector (n = 33)



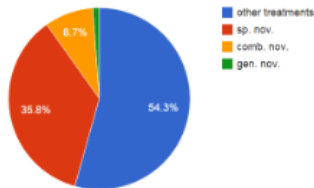


The Issue: treatment content

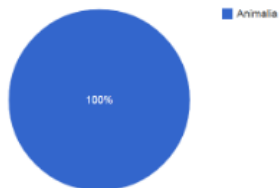
1. Treatments by taxonomic rank (n=254)



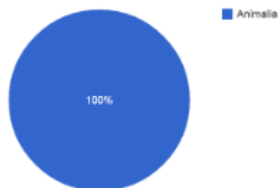
2. Treatments by taxonomic status (n=254)



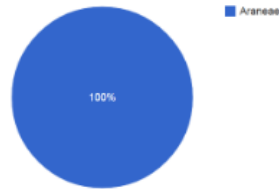
3. Treatments by kingdom (n=254)



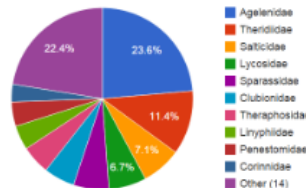
4. Specimens by kingdom (n=4799)



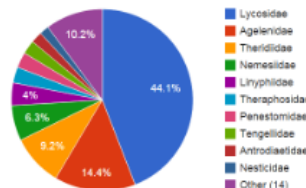
10. Specimens by order (n=4799)



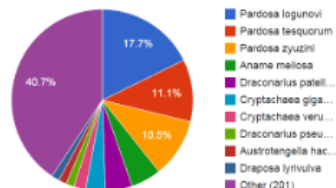
11. Treatments by family (n=254)



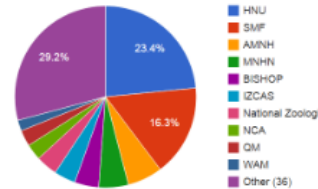
12. Specimens by family (n=4799)



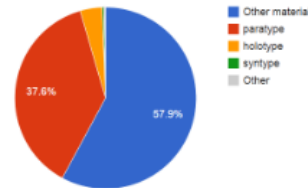
13. Specimens by species (n=4799)



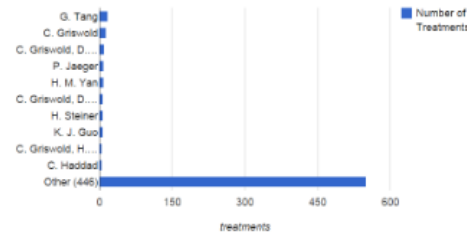
19. Primary type specimens by collection code (n=209)



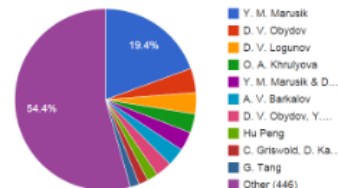
20. Specimens by type status (n=4799)



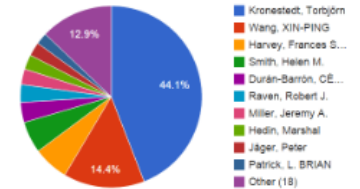
21. Treatments by collector name



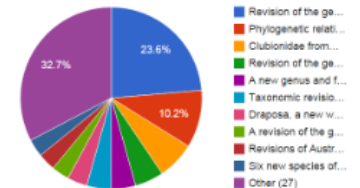
22. Specimens by collector name (n=4476)



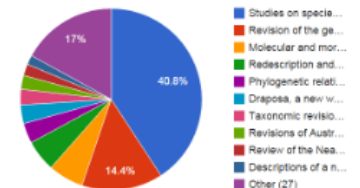
28. Specimens by author (n=4799)



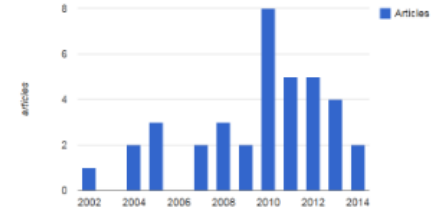
29. Treatments by article (n=254)



30. Specimens by article (n=4799)

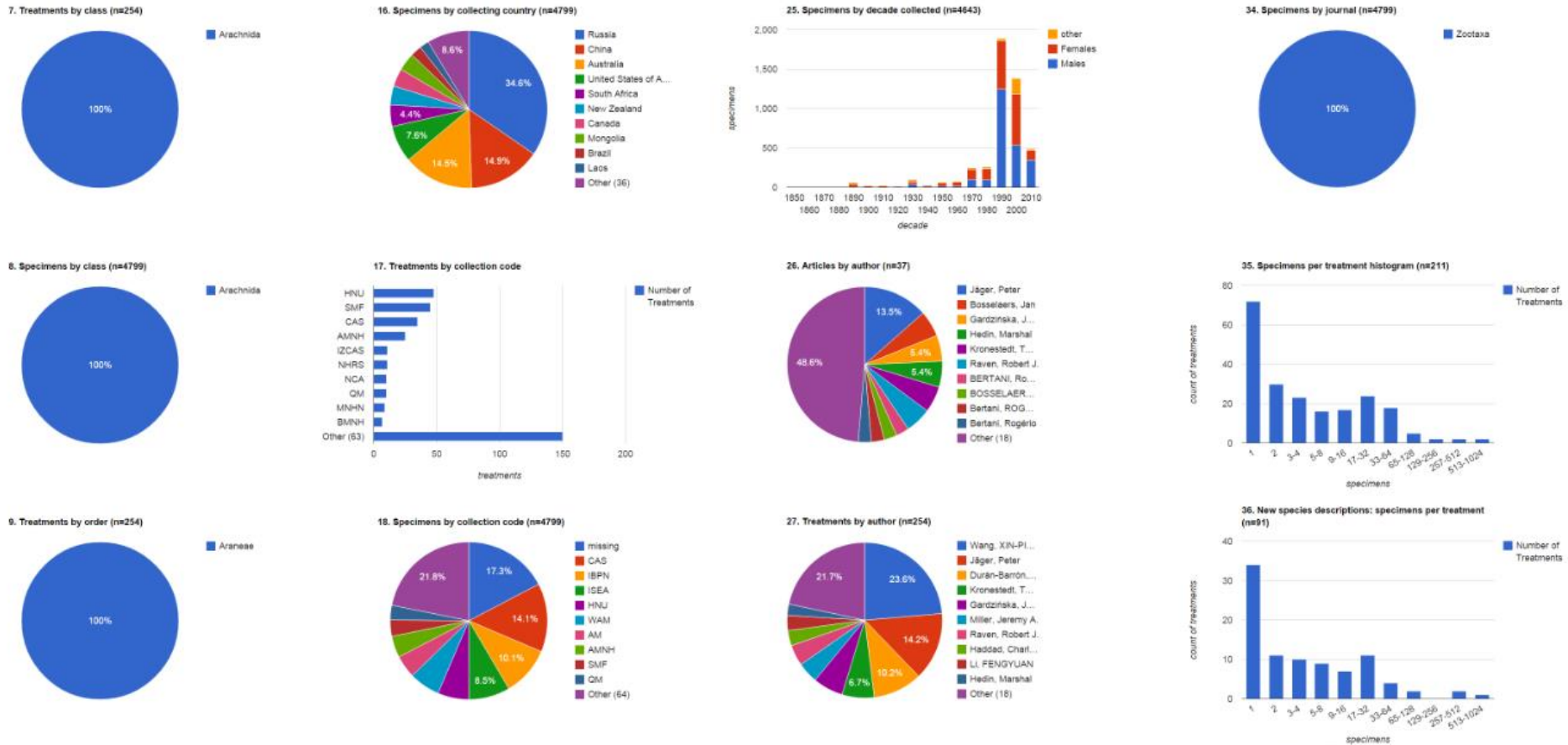


31. Articles by year of publication (n=37)





The issue: treatment content (ctd)



Treatments can have very rich content highly relevant to EU-BON
 Treatments have a high **data quality** standard, being expert products







Tools to mine Plazi data

- API to access data
- Preset queries to extract data
http://plazi.org/wiki/Treatment_Statistics



Entrez PubMed Nucleotide Protein Genome Structure PMC Taxonomy Books

Search for as complete name lock

Display 3 levels using filter: none

Anochetus grandidieri

Taxonomy ID: 269309

Inherited blast name: ants

Rank: species

Genetic code: [Translation table 1 \(Standard\)](#)

Mitochondrial genetic code: [Translation table 5 \(Invertebrate Mitochondrial\)](#)

Other names:

synonym: **Anochetus sp. BLF m2**

synonym: **Anochetus madecassus**

synonym: **Anochetus grandidieri Forel, 1891**

Entrez records	
Database name	Direct links
Nucleotide	189
Protein	162
Popset	2
PubMed Central	1
Taxonomy	1

Lineage(full)

[cellular organisms](#): [Eukaryota](#): [Opisthokonta](#): [Metazoa](#): [Eumetazoa](#): [Bilateria](#): [Protostomia](#): [Ecdysozoa](#): [Panarthropoda](#):
[Arthropoda](#): [Mandibulata](#): [Pancrustacea](#): [Hexapoda](#): [Insecta](#): [Dicondylia](#): [Pterygota](#): [Neoptera](#): [Endopterygota](#): [Hymenoptera](#):
[Apocrita](#): [Aculeata](#): [Vespoidea](#): [Formicidae](#): [Ponerinae](#): [Ponerini](#): [Anochetus](#)

External Information Resources (NCBI LinkOut)

LinkOut	Subject	LinkOut Provider
Anochetus grandidieri	taxonomy/phylogenetic	AntWeb
DNA barcoding : Anochetus grandidieri	taxonomy/phylogenetic	Barcodes of Life
search GBIF	taxonomy/phylogenetic	Global Biodiversity Information Facility
search HNS	taxonomy/phylogenetic	Hymenoptera Name Server
Anochetus grandidieri Forel, 1891	taxonomy/phylogenetic	Integrated Taxonomic Information System
Anochetus madecassus	taxonomy/phylogenetic	Plazi
ANOCHETUS GRANDIDIERI	taxonomy/phylogenetic	



ZooKeys 314: 1–151 (2013)
doi: 10.3897/zookeys.314.3475
www.zookeys.org

RESEARCH ARTICLE



Systematics of Old World *Odontacolus* Kieffer s.l. (Hymenoptera, Platygasteridae s.l.): parasitoids of spider eggs

Alejandro A. Valerio^{1†}, Andrew D. Austin^{2‡},
Lubomír Masner^{3§}, Norman F. Johnson^{1¶}

1 Department of Evolution, Ecology & Organismal Biology, The Ohio State University, 1315 Kinnear Road, Columbus, OH 43212, U.S.A. **2** Australian Centre for Evolutionary Biology and Biodiversity, School of Earth and Environmental Sciences, The University of Adelaide, S.A. 5005, Australia **3** Agriculture and Agri-Food Canada, K.W. Neatby Building, Ottawa, ON K1A 0C6, Canada

† urn:lsid:zoobank.org/author:E4B936BE-5F7D-4A22-B9E7-D237BBDE45BE

‡ urn:lsid:zoobank.org/author:DE71F924-750D-490D-84A7-F5960066F7CC

§ urn:lsid:zoobank.org/author:FA505310-F606-4F6C-A1DF-74B9A0055B2E

¶ urn:lsid:zoobank.org/author:3508C4FF-F027-445F-8417-90AB4A88FE0D

Corresponding author: A. A. Valerio (a.valerio.13@ohiostate.edu); A. D. Austin (andrew.austin@adelaide.edu.au)

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Systematics of Old World
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Kieffer
<italic>s.l.</italic>
(Hymenoptera, Platygasteridae
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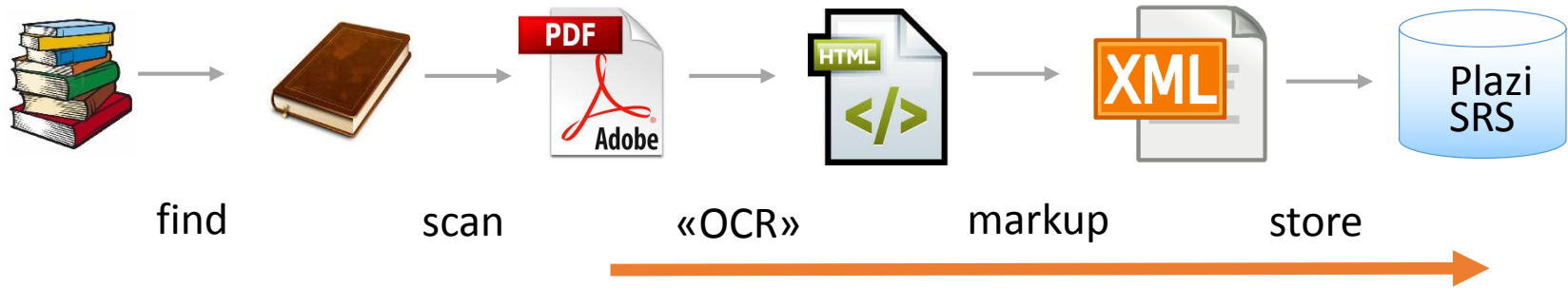
Taxpub version

Submission

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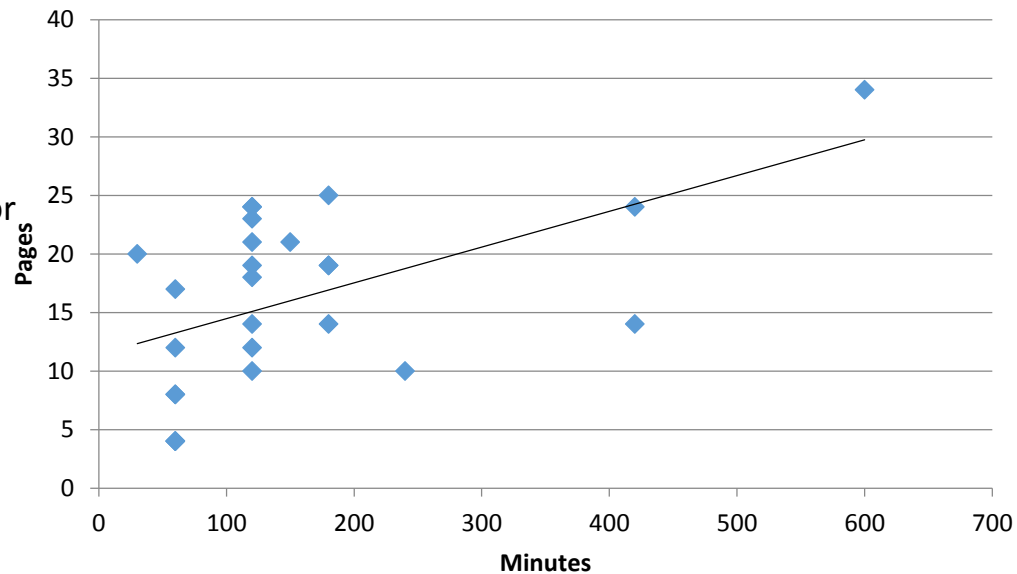


Mark up costs for markup including materials citations



Average:
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OCR: 0.80 EUR /page vendor



Source: Spider Pilot, Jeremy Miller

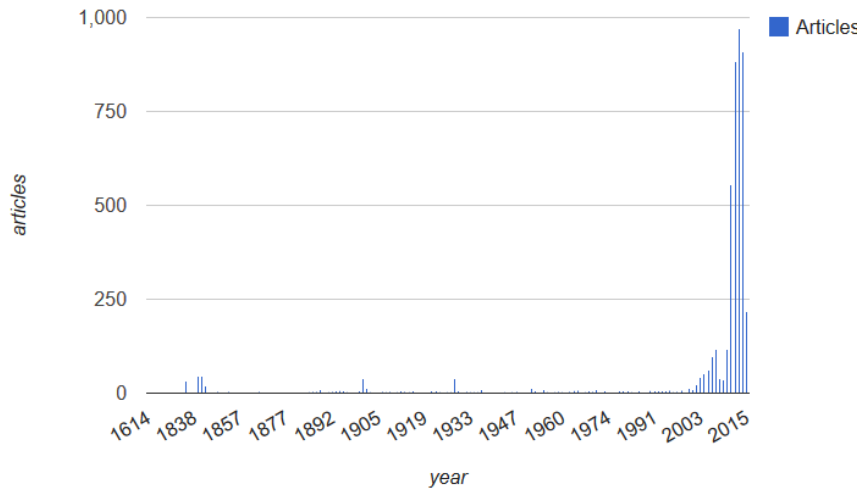
Mark up costs can be lowered by improved tools and parallel and pre-processing



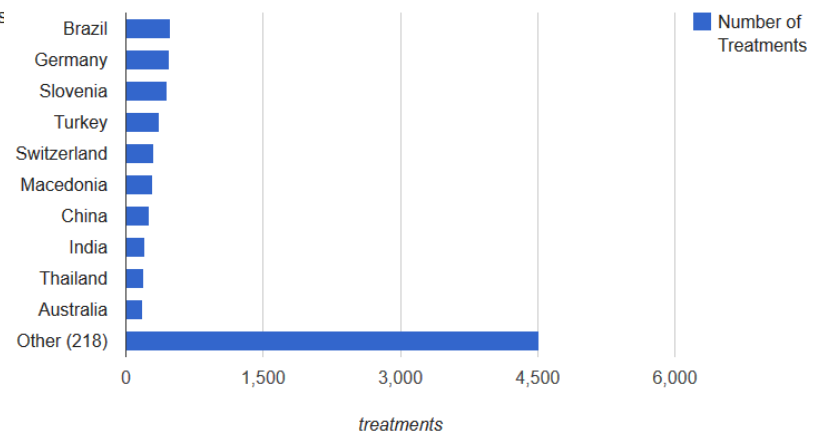
- Beta version of Imagine markup tool to convert PDF
- Import facility to import Taxpub based journals (eg. Pensoft journals)
- TreatmentBank with 126,000 taxa, 56,895 with treatments
- Biodiversity Literature Repository in collaboration with CERN to store taxonomic articles and issue DOIs
- Functional Darwin Core Archive based API to input data into GBIF/EU-BON
 - 28,000 observation records of 3249 taxa (=treatments) that match the GBIF taxonomic backbone.
 - 28% with geo-coordinates



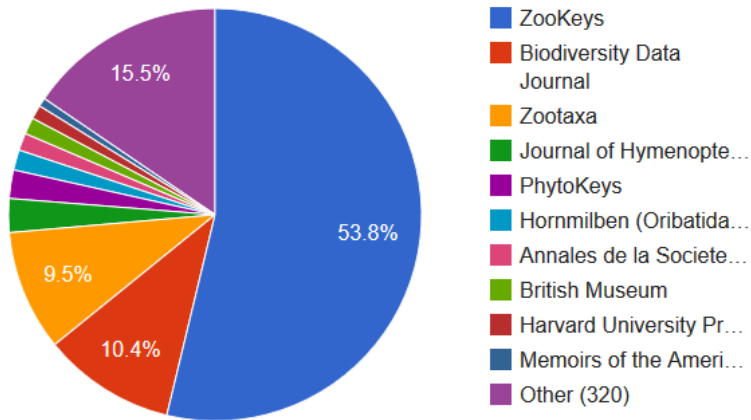
31. Articles by year of publication (n=4793)



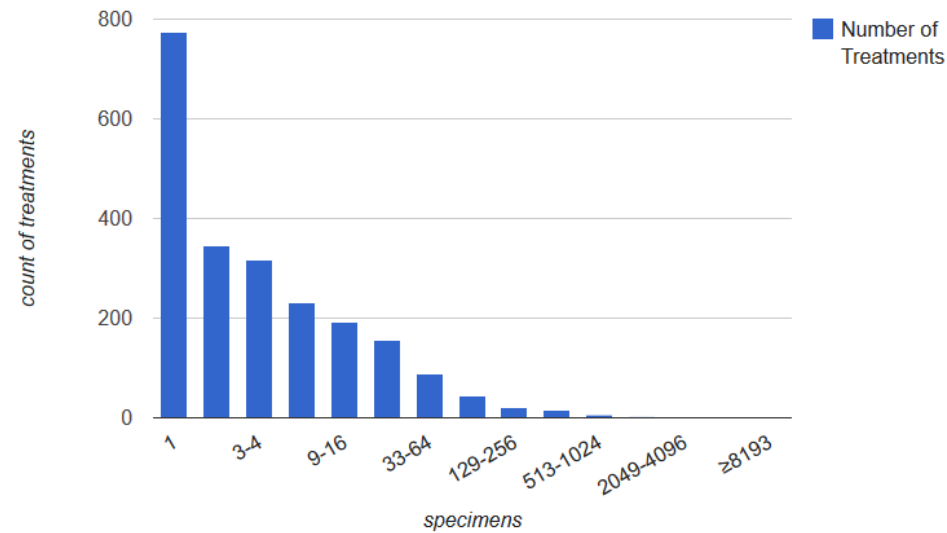
15. Treatments by collecting country



33. Treatments by journal (n=56895)



35. Specimens per treatment histogram (n=2196)





Treatment mining proposal



Combine the data inherent in the genomic and taxonomic world by linking genomic data with organisms names with the (phenotypic) knowledge in the taxonomic domain.

Build the necessary infrastructure to provide a text mining workflow.





Treatments are like abstracts in biomed literature: very concise description of the current information and data on a specific topic.

Organism names have in most cases a long history, and thus multiple treatments for a currently accepted name exist.

Together, this constitutes a huge untapped resource for trait extraction of particular organisms.



Entrez PubMed Nucleotide Protein Genome Structure PMC Taxonomy Books

Search for _____ as complete name lock Go Clear

Display 3 levels using filter: none

Anochetus grandidieri

Taxonomy ID: 269309

Inherited blast name: ants

Rank: species

Genetic code: [Translation table 1 \(Standard\)](#)

Mitochondrial genetic code: [Translation table 5 \(Invertebrate Mitochondrial\)](#)

Other names:

synonym: **Anochetus sp. BLF m2**

synonym: **Anochetus madecassus**

synonym: **Anochetus grandidieri Forel, 1891**

Entrez records	
Database name	Direct links
Nucleotide	189
Protein	162
Popset	2
PubMed Central	1
Taxonomy	1



Lineage(full)

[cellular organisms](#): [Eukaryota](#): [Opisthokonta](#): [Metazoa](#): [Eumetazoa](#): [Bilateria](#): [Protostomia](#): [Ecdysozoa](#): [Panarthropoda](#):
[Arthropoda](#): [Mandibulata](#): [Pancrustacea](#): [Hexapoda](#): [Insecta](#): [Dicondylia](#): [Pterygota](#): [Neoptera](#): [Endopterygota](#): [Hymenoptera](#):
[Apocrita](#): [Aculeata](#): [Vespoidea](#): [Formicidae](#): [Ponerinae](#): [Ponerini](#): [Anochetus](#)

External Information Resources (NCBI LinkOut)

LinkOut	Subject	LinkOut Provider
Anochetus grandidieri	taxonomy/phylogenetic	AntWeb
DNA barcoding : Anochetus grandidieri	taxonomy/phylogenetic	Barcodes of Life
search GBIF	taxonomy/phylogenetic	Global Biodiversity Information Facility
search HNS	taxonomy/phylogenetic	Hymenoptera Name Server
Anochetus grandidieri Forel, 1891	taxonomy/phylogenetic	Integrated Taxonomic Information System
Anochetus madecassus	taxonomy/phylogenetic	Plazi
ANOCHETUS GRANDIDIERI	taxonomy/phylogenetic	



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[Structure](#)
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[Taxonomy](#)
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Search for as complete name lock

Display levels using filter:

Anochetus grandidieri

Taxonomy ID: 269309

Inherited blast name: ants

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Genetic code: [Translation table 1 \(Standard\)](#)

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Lineage(full)



[cellular organisms](#): [Eukaryota](#): [Opisthokonta](#): [Metazoa](#): [Eumetazoa](#): [Bilateria](#): [Protostomia](#): [Ecdysozoa](#): [Panarthropoda](#):
[Arthropoda](#): [Mandibulata](#): [Pancrustacea](#): [Hexapoda](#): [Insecta](#): [Dicondylia](#): [Pterygota](#): [Neoptera](#): [Endopterygota](#): [Hymenoptera](#):
[Apocrita](#): [Aculeata](#): [Vespoidea](#): [Formicidae](#): [Ponerinae](#): [Ponerini](#): [Anochetus](#)

Entrez records	
Database name	Direct
Nucleotide	
Protein	
Popset	
PubMed Central	
Taxonomy	

External Information Resources (NCBI LinkOut)

LinkOut	Subject	LinkOut Provider
Anochetus grandidieri	taxonomy/phylogenetic	AntWeb
DNA barcoding : Anochetus grandidieri	taxonomy/phylogenetic	Barcodes of Life
search GBIF	taxonomy/phylogenetic	Global Biodiversity Information Facility
search HNS	taxonomy/phylogenetic	Hymenoptera Name Server
Anochetus grandidieri Forel, 1891	taxonomy/phylogenetic	Integrated Taxonomic Information System
Anochetus madecassus	taxonomy/phylogenetic	Plazi
ANOCHEtus GRANDIDIERI	taxonomy/phylogenetic	



Entrez PubMed Nucleotide Protein Genome Structure PMC Taxonomy Books

Search for as complete name lock

Display levels using filter:

Anochetus grandidieri

Taxonomy ID: 269309

Inherited blast name: ants

Rank: species

Genetic code: [Translation table 1 \(Standard\)](#)

Mitochondrial genetic code: [Translation table 5 \(Invertebrate Mitochondrial\)](#)

Other names:

synonym: **Anochetus sp. BLF m2**

synonym: **Anochetus madecassus**

synonym: **Anochetus grandidieri Forel, 1891**

Entrez records	
Database name	Direct links
Nucleotide	189
Protein	162
Popset	2
PubMed Central	1
Taxonomy	1

Lineage(full)

[cellular organisms](#): [Eukaryota](#): [Opisthokonta](#): [Metazoa](#): [Eumetazoa](#): [Bilateria](#): [Protostomia](#): [Ecdysozoa](#): [Panarthropoda](#):
[Arthropoda](#): [Mandibulata](#): [Pancrustacea](#): [Hexapoda](#): [Insecta](#): [Dicondylia](#): [Pterygota](#): [Neoptera](#): [Endopterygota](#): [Hymenoptera](#):
[Apocrita](#): [Aculeata](#): [Vespoidea](#): [Formicidae](#): [Ponerinae](#): [Ponerini](#): [Anochetus](#)

External Information Resources (NCBI LinkOut)

LinkOut	Subject	LinkOut Provider
Anochetus grandidieri	taxonomy/phylogenetic	AntWeb
DNA barcoding : Anochetus grandidieri	taxonomy/phylogenetic	Barcodes of Life
search GBIF	taxonomy/phylogenetic	Global Biodiversity Information Facility
search HNS	taxonomy/phylogenetic	Hymenoptera Name Server
Anochetus grandidieri Forel, 1891	taxonomy/phylogenetic	Integrated Taxonomic Information System
Anochetus madecassus	taxonomy/phylogenetic	Plazi
ANOCHETUS GRANDIDIERI	taxonomy/phylogenetic	



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[Nucleotide](#)
[Protein](#)
[Genome](#)
[Structure](#)
[PMC](#)
[Taxonomy](#)
[Books](#)

Search for as complete name lock

Display levels using filter:

Anochetus grandidieri

Taxonomy ID: 269309
 Inherited blast name: ants
 Rank: species
 Genetic code: [Translation table 1 \(Standard\)](#)
 Mitochondrial genetic code: [Translation table 5 \(Invertebrate\)](#)
 Other names:

- synonym: **Anochetus sp. BLF m2**
- synonym: **Anochetus madecassus**
- synonym: **Anochetus grandidieri Forel, 1891**

Synonyms (2) <input type="checkbox"/> show fossils: <input checked="" type="checkbox"/>		
Taxon	Status	Relationship Type
Anochetus grandidieri Forel <input type="checkbox"/>	Subsequent name/combination	Present combination
Anochetus madecassus Santschi <input type="checkbox"/>	Original name/combination	Junior synonym

Lineage (full)

[cellular organisms](#): [Eukaryota](#): [Opisthokonta](#): [Metazoa](#): [Eumetazoa](#): [Bilateria](#): [Protostomia](#): [Ecdysozoa](#): [Panarthropoda](#): [Arthropoda](#): [Mandibulata](#): [Pancrustacea](#): [Hexapoda](#): [Insecta](#): [Dicondylia](#): [Pterygota](#): [Neoptera](#): [Endopterygota](#): [Hymenoptera](#): [Apocrita](#): [Aculeata](#): [Vespoidea](#): [Formicidae](#): [Ponerinae](#): [Ponerini](#): [Anochetus](#)

External Information Resources (NCBI LinkOut)

LinkOut
Anochetus grandidieri
DNA barcoding : Anochetus grandidieri
search GBIF
search HNS
Anochetus grandidieri Forel, 1891
Anochetus madecassus
ANOCHETUS GRANDIDIERI

- ⊕ **Anochetus Grandidieri** Forel, 1891: 108. Original description, placed in subgenus Ponera (Ponera)
- ⊕ **Anochetus grandidieri** Forel: Dalla Torre, 1893: 48. Cataloged.
- ⊕ **Anochetus grandidieri** Forel: Emery, 1911: 109. Cataloged, placed in subgenus Anochetus (Anoc)
- ⊕ **Anochetus grandidieri** Forel: Wheeler, 1915: 109. Cataloged, distributed
- ⊕ **Anochetus grandidieri** Forel: Wheeler, 1915: 109. Cataloged, distributed
- ⊕ **Anochetus madecassus** Santschi, 1928: 54. Original description.
- ⊕ **Anochetus madecassus** Santschi: Baroni Urbani, 1973: 142. Type information.
- ⊕ **Anochetus grandidieri** Forel: Brown, 1978: 557, 564, 571, 606. Description, listed, synonymy, pl
- ⊕ **Anochetus madecassus** Santschi: Brown, 1978: 557, 606. Junior synonym of Anochetus grandid
- ⊕ **Anochetus grandidieri** Forel: Bolton, 1995: 64. Cataloged.
- ⊕ **Anochetus grandidieri** Forel: Fisher & Smith, 2008: 4, 8, 5c, 8b, figs .3a-3j, map6b. Description,
- ⊕ **Anochetus madecassus** Santschi: Fisher & Smith, 2008: 8. Lectotype designation.

PDF

LOD

Treatment mining proposal



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Search for
Display 3 levels usin

Anochetus grandidi

Taxonomy ID: 269309
Inherited blast name: ants
Rank: species
Genetic code: Translation ta
Mitochondrial genetic code:
Other names:

synonym: **Anochetus sp. B**
synonym: **Anochetus made**
synonym: **Anochetus gran**

Lineage(full)

cellular organisms: Eu
Arthropoda: Mandibul
Apocrita: Aculeata: V:

External Information Res

LinkOut
Anochetus grandidieri
DNA barcoding : Anochetus
search GBIF
search HNS
Anochetus grandidieri Forel, 1891
Anochetus madecassus
ANOCHETUS GRANDIDIERI

Anochetus madecassus Santschi	
Publication Data, Additional Information (status, external links, etc)	
treatment citation	Santschi, F., 1928, Descriptions de nouvelles fourmis éthiopiennes (quatrième note), Revue de Zoologie et de Botanique Africaines 16, pp. 54-59: 54
publication ID	3628
link to original citation	http://antbase.org/ants/publications/3628/3628
treatment provided by	Christiana
persistent identifier	http://treatment.plazi.org/id/1B6CA0F7-C3C3-6
additional text versions	Plain XML TaxonX
scientific name	Anochetus madecassus Santschi
status	n. sp.
external databases	HNS
distribution map	

Treatment
1. — *Anochetus madecassus*^{HNS}, n. sp.
[[queen]], long. 3,5 mm. Jaune-roussâtre, pattes un peu plus claires. Bout des antennes brunâtres. Une forte ponctuation pilifère espacée d'un à deux diamètres de poi l'épinothum. Un pinneau de fines stries va des arêtes frontales à mi-distance de l'écaille en outre un peu ridés en travers. Quelques points clairsemés sur le reste du thorax pubescence courte et assez abondante sur les appendices et le gastre, plus rare sur le abdomen. Seulement quelques poils obliques sur le thorax.
Tête faiblement échancrée derrière (vue de front), bien moins que chez *A. africanus* presque droits du devant des yeux aux angles postérieurs, se rétrécissant au d latéralement. Leur diamètre égale la largeur des mandibules au tiers externe. Epistome à prolongement lancéolé entre les arêtes frontales, comme chez *A. africanus* (For.), le bord antérieur convexe. Mandibules à bord antérieur subdenté avec 1 ou 2 longues dents terminales, la médiane un peu plus courte et soudée en partie à l'écaille postérieure de la tête. Articles 2 et 3 du funicule aussi larges que longs, les articles 4 et 5 aussi long que la basale. Écaille aussi haute que l'épinothum, échancrée au bout, trois fois plus haute que longue à la base. Etranglement postpetiolaire assez at

Madagascar: Nossi-Be (DESCARPENTRIES) [[queen]] CASC .	taxonomy/phylogenetic
	taxonomy/phylogenetic
	taxonomy/phylogenetic
	taxonomy/phylogenetic
	taxonomy/phylogenetic

PMC	Taxonomy	Books
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Anochetus grandidieri Forel	
Publication Data, Additional Information (status, external links, etc)	
treatment citation	Forel, A., 1891, Histoire naturelle des Hyménoptères. Deuxième partie: Les Formicides, Histoire Physique, Naturelle et Politique de Madagascar., Paris: L'Imprimerie Nationale, pp. 1-231: 108-109
publication ID	6734
link to original citation	http://dx.doi.org/10.5281/zenodo.9896
treatment provided by	Donat
persistent identifier	http://treatment.plazi.org/id/1C4EDC17-8AD7-9DD7-F1A5-AB86E8C5BCA
additional text versions	Plain XML TaxonX
scientific name	Anochetus grandidieri Forel
status	n. sp.
external databases	HNS
distribution map	

Treatment
2. ANOCHETUS GRANDIDIERI^{HNS}, n. sp.
(Pl. III, fig. 9, 9a, 9b et 9c) [View Figure](#)
[[worker]]. Longueur 4 mill. Voisin des *A. rectangularis*, Mayr^{HNS}, et *A. Mayri*^{HNS}, Emery, dont il est du reste facile à distinguer. Mandibules à bord interne sans trace de dentelures, passant presque sans angle à la dent terminale supérieure. Elles se terminent par deux dents très courtes et très obtuses (cependant il est possible que ce soit l'effet de l'usure chez l'exemplaire unique, et que chez les jeunes [[worker]] les dents soient longues et pointues. Dans ce cas, il se pourrait qu'il existe une troisième petite dent médiane se détachant de la dent inférieure vers son milieu, comme chez diverses espèces, dent qui serait entièrement rapée chez notre exemplaire). Epistome court, sans prolongement lancéolé entre les arêtes frontales (seulement avec un court prolongement triangulaire entre leurs extrémités antérieures). Son bord antérieur est à peine largement échancré, et n'est pas prolongé en oreilles sur la base des mandibules. Une impression transversale sur le devant de la tête, entre les arêtes frontales, et qui se prolonge sur le sillon frontal étroit et peu profond. Le mésothorax à peine plus large que le métanotum. Cette dernière est de la même longueur que les arêtes frontales, distinctes, larges et profondes. La face basale du métanotum proéminente, relevée, à large base, beaucoup plus grande que celles de *A. Mayri*^{HNS}. La face décline du métanotum latéralement par une faible arête, prolongement de la dent du bord supérieur droit ou même faiblement échancré, formant une arête médiane entre celle de *A. rectangularis*^{HNS} et celle de *A. Mayri*^{HNS}. Elle tient le milieu entre celle de *A. rectangularis*^{HNS} et celle de *A. Mayri*^{HNS}. Abdomen plutôt court. Luisant. Tête en dessus (sauf la fosse frontale) avec une ponctuation pilifère, très forte sur le milieu et au bord antérieur, face basale et espace inter-articulaire (un peu réticulés sur le métanotum). Quelques rides longitudinales luisantes avec des points piligères très épars. Une pubescence sur tout le corps, surtout sur la tête, sur les scapes et sur les arêtes, éparse ailleurs, sauf sur l'abdomen où elle est plus abondante.
D'un rouge plus ou moins brunâtre ou jaunâtre suivant les parties du corps. Antennes et pattes testacées.
Forêts de la côté Est de Madagascar (M. Humblot) [View MaterialsCASC](#).

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Current View: Global: All Ants - Change View

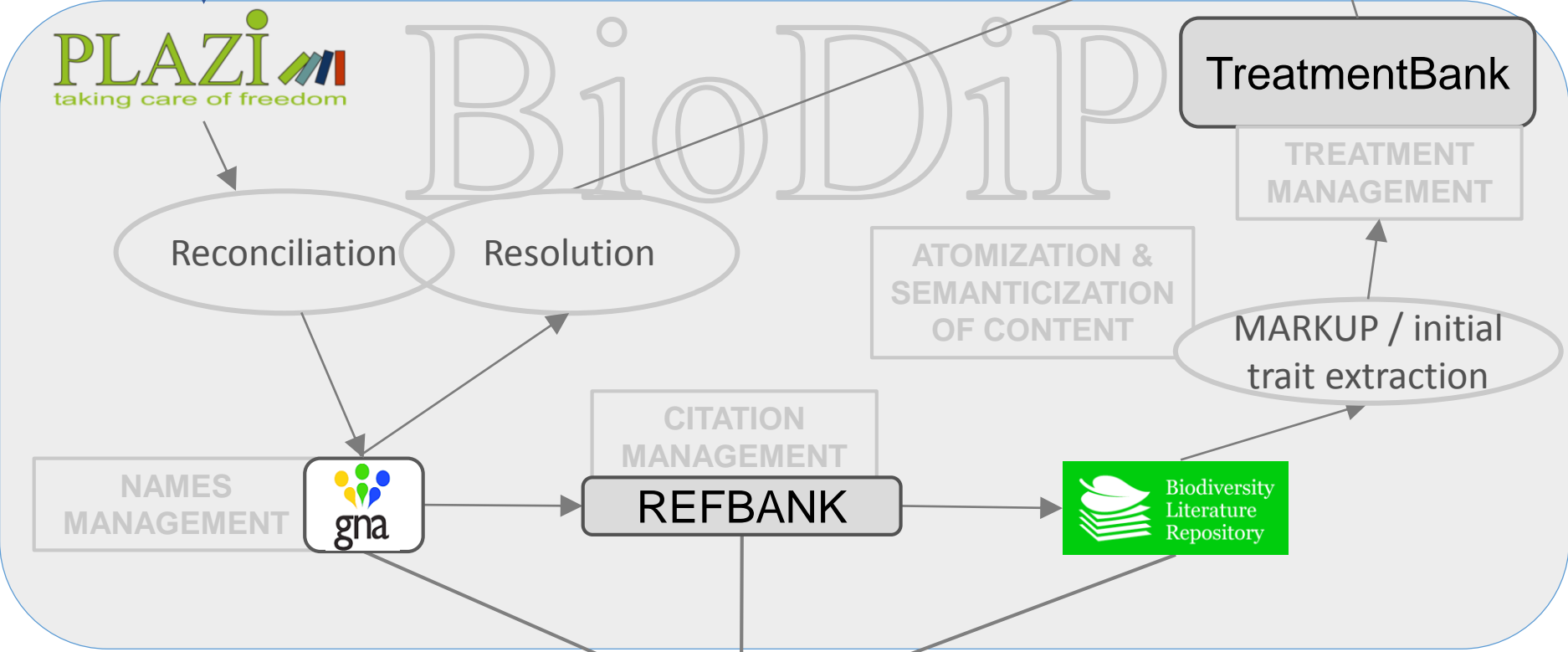
Specimen: CASCENT010098 *Anochetus grandidieri* [Overview](#) [Images](#)
Classification: Order: Hymenoptera Family: Formicidae Subfamily: Formicinae Genus: *Anochetus* Species: *grandidieri* Specimen: CASCENT010098

Persistent Identifier: <http://dx.doi.org/10.26434/chem:antweb:CASCENT010098>

Locality Information:
Collection: Madagascar (Nosy Be)
Latitude: 0.0
Longitude: 0.0
Lithology:
Lithology Max Error:
Elevation:
Elevation Max Error:
Locality Notes:
Collection Information:
Collector code: ANTC3651
Collected by: Decarpent
Habitat:
Date collected:
Image:



Trait information
machine ready



Specialist taxonomic
databases



Taxonomic coverage:

Drosophilds:

4279 species level taxa (6633 available species level names)
16,000+ bibliographic references and PDF copies

Ants:

13,000 species level taxa (60,000 taxonomic name usages)
ca 5000 bibliographic references and PDF copies

Spiders:

43,000 species level taxa
ca 12000 bibliographic references and PDF copies

All taxa are completely covered and the data is or will be available, and the bibliographic refernces and PDFs will be hosted on BLR



How do we do this?



Bouchout Declaration

Blue List

Plazi workflow

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Top
Abstract
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Conclusion
Competing interests
Authors' contributions
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Taxonomic information exchange and copyright: the Plazi approach
Donat Agosti¹ and Willi Egloff^{2*}

* Corresponding author: Willi Egloff egloff_bader@bluewin.ch Author Affiliations

¹ Plazi, Zinggstrasse 16, CH-3007, Bern, Switzerland
² Advococomplex, Zinggstrasse 16, CH-3007, Bern, Switzerland

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Abstract

Background

A large part of our knowledge on the world's species is recorded in the corpus of biodiversity literature with well over hundred million pages, and is represented in natural history collections estimated at 2 - 3 billion specimens. But this body of knowledge is almost entirely in paper-print form and is not directly accessible through the Internet. For the digitization of this literature, new territories have to be chartered in the fields of technical, legal and social issues that presently impede its advance. The taxonomic literature seems especially destined for such a transformation.

Discussion

Plazi was founded as an association with the primary goal of transforming both the printed and, more recently, "born-digital" taxonomic literature into semantically enabled, enhanced documents. This includes the creation of a test body of literature, an XML schema modeling its logic content

BMC Research Notes
Volume 2

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BOUCHOUT DECLARATION

DECLARATION BACKGROUND FAQs SIGNATORIES SIGN

The Bouchout Declaration for Open Biodiversity Knowledge Management

The purpose of the Bouchout Declaration is to help make digital data about our biodiversity openly available. It offers members of the biodiversity community a way to demonstrate their commitment to open science.

Declaration
As signatories, we encourage an overarching approach to Open Biodiversity Knowledge Management which is based on the following fundamental principles: (...)

News
The latest news and announcements covering the Declaration [...]

Sign
Your signature is your commitment to an Open Biodiversity Knowledge Management system that will provide direct access to research data.

PLAZI
taking care of freedom

News Publications About

The Blue List

The Blue List: elements of taxonomic information that are not subject to copyright.

One impediment to open sharing of biological content is uncertainty as to whether and how intellectual property rights apply to biodiversity information. To clarify the situation, and in collaboration with the *Global Names* project, Plazi organized a workshop in Tempe, Arizona in April 2013 in which we brought together providers and users of taxonomic information, data managers, and intellectual property Rights lawyers from Europe and the USA. The perspectives of interested parties were submitted via a *SNARL* (Scientific Names Attributes, Rights and Licensing) wiki. The outcomes of the workshop were published as Patterson, D. J., Egloff, W., Agosti, D., Eades, D., Franz, N., Hagedorn, G., Rees, J. A. and Remsen, D. P. 2014. Scientific names of organisms: attribution, rights, and licensing *BMC Research Notes* 7:79 doi:10.1186/1756-0500-7-79. Copyright is not applicable to facts or those elements that are normally included in taxonomic sources. The 'blue list' identifies those elements of scientific publications, databases, monographs, classifications, checklists etc. to which copyright does not apply, and that can be re-used without permission. Permission will be required if a data-use agreement is in place and agreed to by both parties; and all users are reminded that it is appropriate to inform the sources of any re-use and to provide appropriate credit to sources.

- A hierarchical organization (= classification), in which, as examples, species are nested in genera, genera in families, families in orders, and so on.
- Alphabetical, chronological, phylogenetic, palaeontological, geographical, ecological, host-based, or feature-based (e.g. life-form) ordering of taxa.
- Scientific names of genera or other unimomial taxa, species epithets of species names, binomial combinations as species names, or names of infraspecific taxa; with or without the author of the name and the date when it was first introduced. An analysis and/or reasoning as to the nomenclatural and taxonomic status of the name is a familiar component of a treatment.

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agosti

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Book Open access

Revision of the ant genus Myrmoteras in the Malay Archipelago (Hymenoptera, Formicidae)

Agosti, Donat

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30 June 1992

DOI

DOI 10.5281/zenodo.10693

Keyword(s):

systematics, biology, taxonomy, Oriental Region, Myrmoteras, revision

Published in:

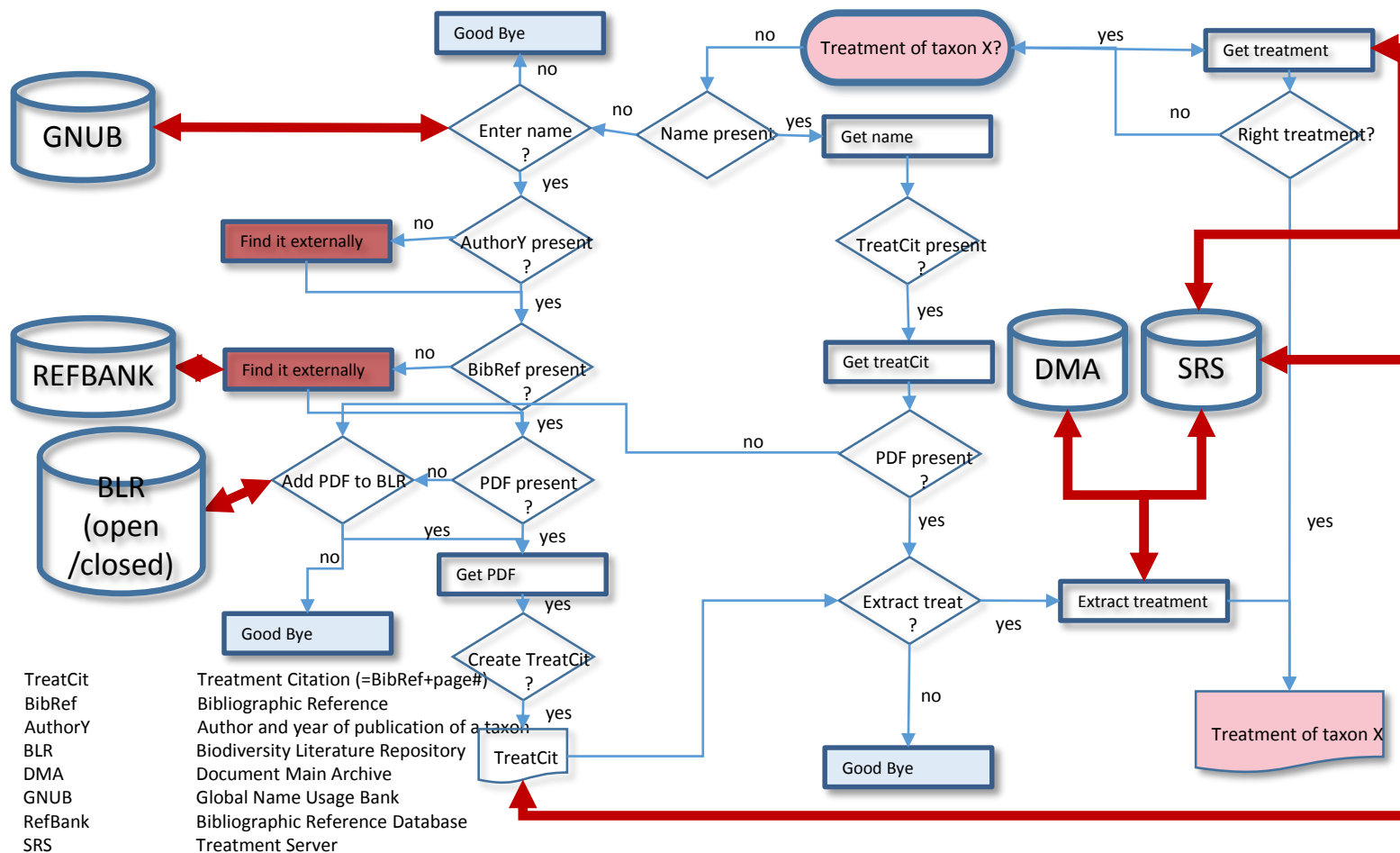
Revue Suisse de Zoologie: 99 (1992) pp. 405-429

Collections:

Publication conversion workflow



«please give me the treatment of taxon X»

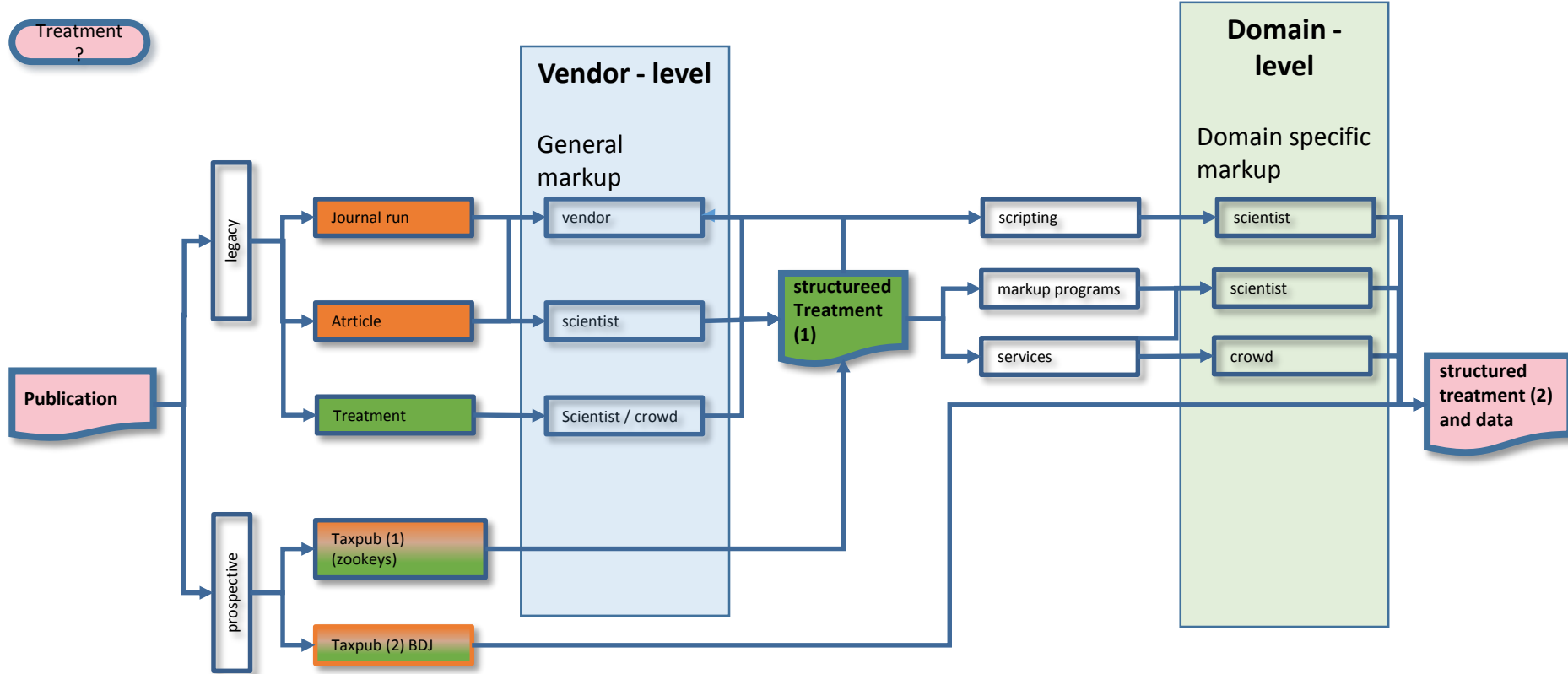




Plazi workflow



1. Publication conversion workflow



Work

Data

Work OpenAccess



Markup



Markup

Goal: high quality data based on high quality extracted unstructured text from images to digital born PDFs.

Emphasis on extraction of treatments and substructure, scientific names, , various codes, treatment citations, bibliographic references, observation records, traits, figure legends and figures, tables, and linking to external resources.



Markup

Solution: After extensive testing decision to build our own, modular, open source extraction tool *GoldenGate Imagine*.



Demonstration of Imagine

GoldenGATE Imagine - Default.imagine

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Display Control

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2004

ZOOTAXA

Descriptions of a new species and previously unknown males of *Nesticus* (Araneae: Nesticidae) from caves in Eastern North America, with comments on species rarity

W. J. ARS, M. J. HITTIN, & J. O. ROBERTS

Department of Ecology, University of California, Riverside, California 92521-0151, USA (w.ars@ucr.edu)

Department of Biology, University of North Carolina, Asheville, North Carolina 28804, USA

Abstract

Nesticus (Araneae: Nesticidae) previously unknown males, previously uncollected, and new species from the southern edge of the Cumberland Plateau (eastern Tennessee) are described. *Nesticus* (Araneae: Nesticidae) previously unknown males and *Nesticus* (Araneae: Nesticidae) previously unknown males are described. These new species are described with illustrations from figures of their from their respective localities. *Nesticus* (Araneae: Nesticidae) previously unknown males and new species are described. Several new species are described from the southern edge of the Cumberland Plateau (eastern Tennessee) and the biological characteristics of these species are discussed. The new species are described with illustrations from figures of their from their respective localities.

Key words: Araneae, Nesticidae, new species, new records, new records

Introduction

The genus *Nesticus* (Hessell, 1869) (family Nesticidae) is taxonomically diverse in the southern Appalachian mountains of eastern North America, with 13 species distributed over a geographic area extending from southern West Virginia to central Alabama (Carlson 1987; Carlson & McCarty 1992; Hedin 1997). Appalachian *Nesticus* are habitat specialists, requiring apparently humid, shaded epigeal cave or subterranean habitats to cool, moist microclimates. These conditions, in combination with habitat discontinuity in both space and time, may have promoted *Nesticus* species diversification and endemism (see discussion in detail in Wiersma 2004a,b). The southern edge of the



Markup

Status quo: Functional prototype desktop application in daily use.

Next steps: Build a server side application that will be integrated as automatic step after upload of new documents on BLR.
Improve UI.



Conclusions

Avoid create legacy data....



Thanks!

Donat Agosti

agosti@plazi.org

Terry Catapano

catapanoth@gmail.com