



Freshwater Animal Diversity Assessment (FADA):

The next step: exploring possible ways to analyse data

Bruges, 5-7 December 2008

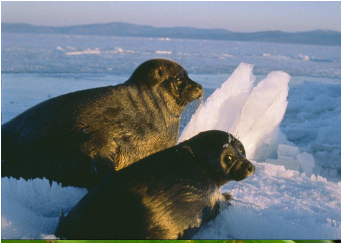
BELGIAN SCIENCE POLICY



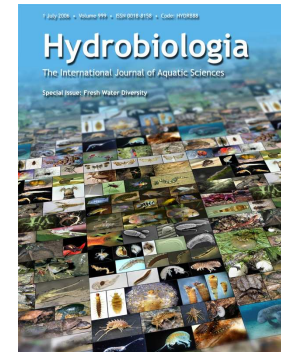
museum



FADA *Activities*



- FADA 1: Special issue of Hydrobiologia Publication January 2008



- FADA 2: Valorisation of FADA 1 results and data :
 - Online database of species level and distributional data
 - Biogeographic analyses
 - Endemicity and Richness comparison among groups
- FADA 3: Establishment of a Freshwater Biodiversity Consortium (FBiC) including Species 2000, FishBase, IUCN, WWF Freshwater Eco-regions, The Nature Conservancy...



Number of Copepod freshwater species recorded per zoogeographic region. PA – Palaearctic ; NA – Nearctic; NT – Neotropical; AT – Afrotropical ; OL – Oriental; AU – Australasian; PAC – Pacific Oceanic Islands; ANT – Antarctic



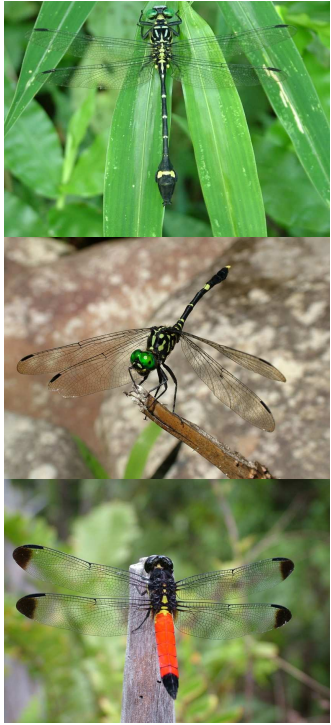
Taxon	PA	NA	AT	NT	OL	AU	PAC	ANT	World species number
Calanoida									
Diaptomidae	144	77	72	82	92	2	-	-	441
Centropagidae	7	4	-	22	4	47	2	7	79
Temoridae	22	18	-	-	-	-	-	-	30
Aetideidae (<i>Senecella</i>)	2	2	-	-	-	-	-	-	2
Harpacticoida									
Canthocamptidae	325	59	46	109	58	51	3	4	627
Parastenocarididae	108	8	34	65	16	2	1	-	249
Ameiridae	97	9	9	17	10	15	6	-	149
Miraciidae (Diosaccidae)	27	-	13	6	3	8	1	-	53
Ectinosomatidae	11	1	-	-	1	-	-	-	13
Phyllognathopodidae	3	2	3	3	3	3	-	1	10
Harpacticidae	4	-	-	-	1	-	-	-	4
Chappuisiidae	2	-	-	-	-	-	-	-	2
Huntemanniidae	3	1	1	1	-	-	-	-	6
Laophontidae	2	3	2	1	2	3	-	-	7
Cletodidae	1	-	-	-	3	-	-	-	3
Darcythompsoniidae	1	-	-	-	-	-	-	-	1
Cyclopoida									
Cyclopidae	337	114	167	174	115	64	16	5	800
Oithonidae	-	2	-	6	2	-	-	-	7
Ozmanidae	-	-	-	2	-	-	-	-	2
Lernaeidae	17	8	39	10	47	2	-	-	114
Ergasilidae	56	26	19	63	23	8	-	-	173
Gelyelloida									
Gelyellidae	2	-	-	-	-	-	-	-	2
Siphonostomatoida									
Lernaeopodidae	31	12	-	-	1	-	-	-	38
Caligidae	1	-	-	-	-	-	-	-	1
Dichelesthidae	1	1	-	-	-	-	-	-	1
Total	1204	347	405	561	381	205	29	17	2814



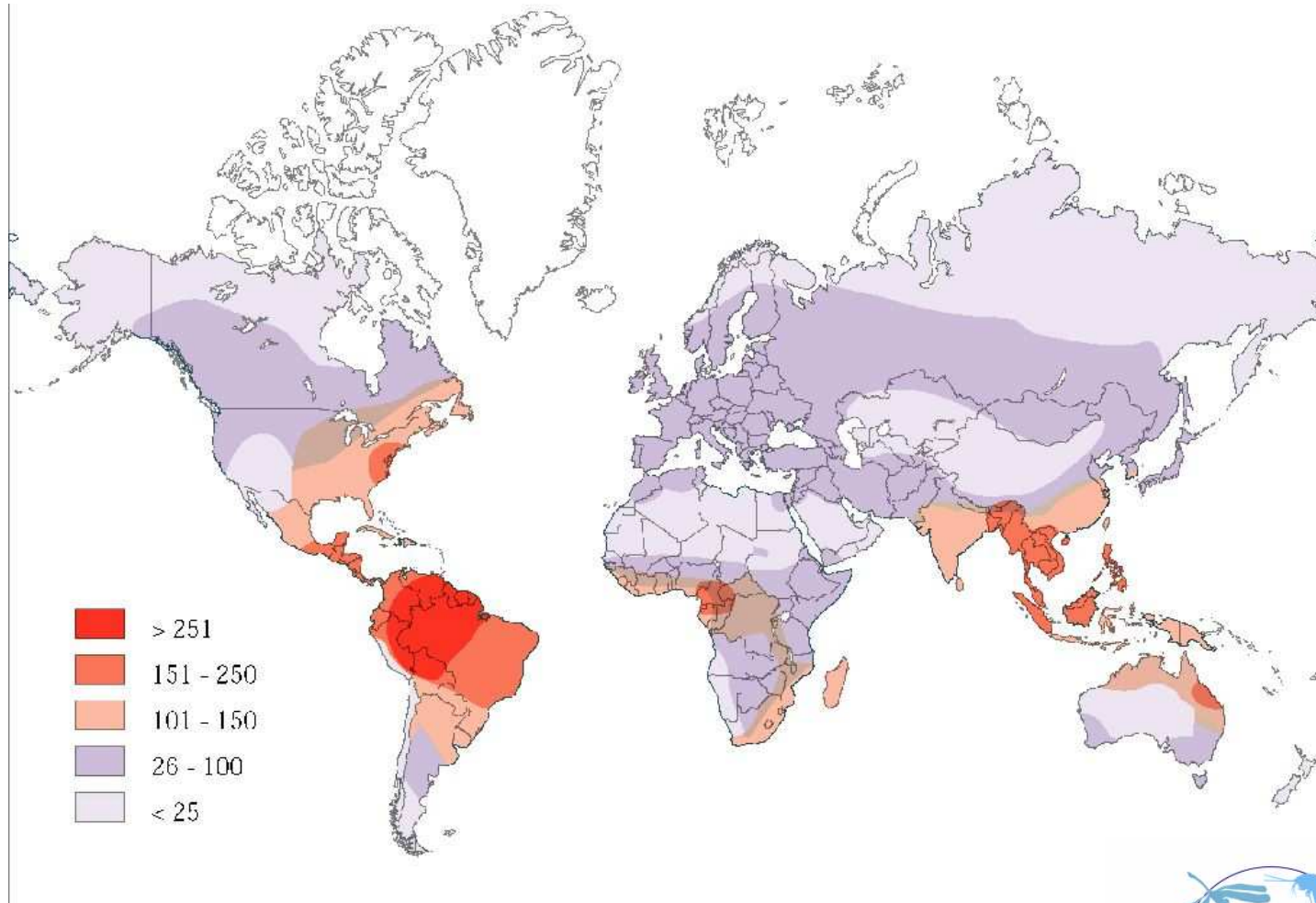
Number of Copepod freshwater genera recorded per zoogeographic region; number in parentheses indicates number of genera that are endemic to the region.

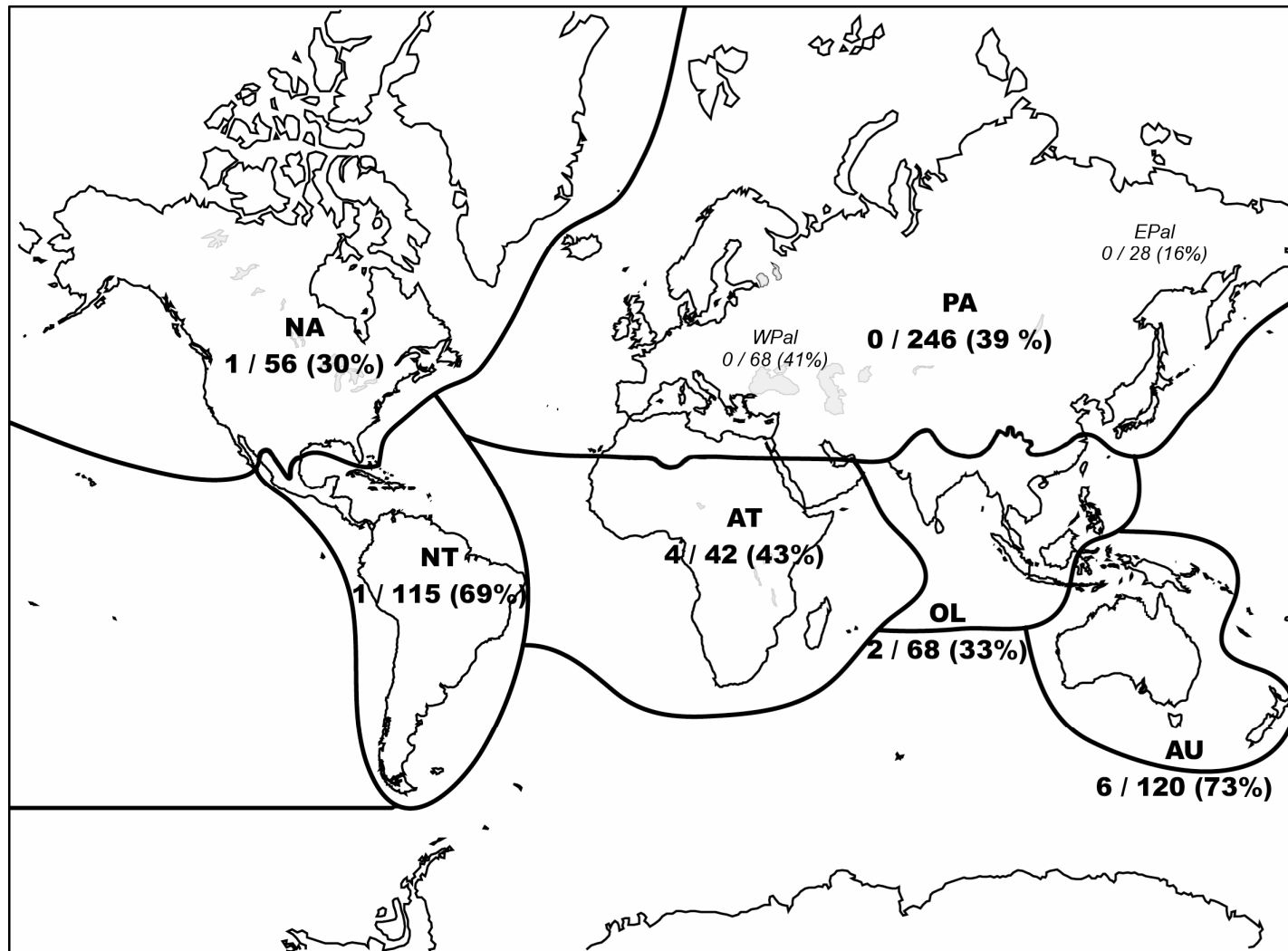
Taxon	PA	NA	AT	NT	OL	AU	PAC	ANT	World genera number
Calanoida									
Diaptomidae	25 (9)	14 (4)	7 (3)	18 (14)	22 (10)	2 (0)	-	-	60(40)
Centropagidae	3 (0)	3 (0)	-	3 (3)	2 (0)	7 (2)	2 (1)	3 (0)	8(5)
Temoridae	3 (0)	3 (0)	-	-	-	-	-	-	4(0)
Aetideidae (<i>Senecella</i>)	1 (0)	1 (0)	-	-	-	-	-	-	1(0)
Harpacticoida									
Canthocamptidae	23 (11)	9 (1)	6 (1)	12 (3)	9 (2)	8 (2)	1 (0)	3 (0)	38(21)
Parastenocarididae	2 (1)	1 (0)	1 (0)	6 (5)	1 (0)	1 (0)	1 (0)	-	6(4)
Ameiridae	6 (1)	5 (0)	3 (0)	4 (0)	3 (0)	6 (2)	1 (0)	1 (0)	9(4)
Miraciidae (Diosaccidae)	2 (0)	-	1 (0)	1 (0)	2 (1)	1 (0)	1 (0)	-	2(1)
Ectinosomatidae	5 (1)	1 (0)	-	-	1 (1)	-	-	-	6(2)
Phyllognathopodidae	1 (0)	1 (0)	1 (0)	2 (1)	2 (1)	1 (0)	-	1 (0)	3(2)
Harpacticidae	1 (0)	-	-	-	1 (0)	-	-	-	1(1)
Chappuisiidae	1 (1)	-	-	-	-	-	-	-	1(1)
Huntemanniidae	2 (0)	2 (0)	1 (0)	1 (0)	1 (0)	-	-	-	2(0)
Laophontidae	4 (0)	3 (0)	2 (0)	2 (0)	2 (0)	3 (0)	-	1 (0)	6(0)
Cletodidae	1 (0)	-	-	-	1 (0)	-	-	-	1(0)
Darcythompsoniidae	1 (0)	-	-	-	-	-	-	-	1(0)
Cyclopoida									
Cyclopidae	32(6)	23 (1)	25 (2)	30(11)	19 (1)	19 (3)	9(0)	5(0)	55(24)
Oithonidae	-	1 (0)	-	2 (0)	1 (0)	-	-	-	2(0)
Ozmanidae	-	-	-	1 (1)	-	-	-	-	1(1)
Lernaeidae	4 (0)	1 (0)	7 (3)	6 (5)	7 (3)	1 (0)	-	-	16(11)
Ergasilidae	8 (1)	5 (0)	6 (1)	16 (13)	5 (0)	3 (1)	-	-	24(16)
Gelyelloida									
Gelyellidae	1 (1)	-	-	-	-	-	-	-	1(1)
Siphonostomatoida									
Lernaeopodidae	6 (3)	3 (1)	-	-	-	-	-	-	7(4)
Caligidae	1 (0)	-	-	-	-	-	-	-	1(0)
Dichelesthidae	1 (0)	1 (0)	-	-	-	-	-	-	1(0)
Total	134(35)	87(8)	60(12)	104(54)	79(19)	50(10)	15(1)	14(0)	257(138)





Species diversity of odonata: diversity hotspots





The number of recorded Trichoptera endemic families and endemic genera/subgenera (also expressed as a percentage of total genera/subgenera) for each major zoogeographic region.





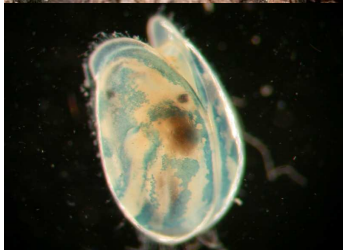
FADA database: where are we?

- On 59 contributors/chapters, 26 agreed to participate to the database, 14 sent a file with species data,
- 4 files have been successfully imported in the database: Rotifera, Plecoptera, Ostracoda, Copepoda (calanoids)





ISSUE	GROUP
Problems of Data quality or access	Nemertea, Gastropoda, Ephemeroptera, Odonata, Heteroptera, Lepidoptera
OK for database but need time and / or man power	Nematoda, Gastrotricha, Oligochaeta, Polychaeta, Amphipoda, Caridea (not on internet), Coleoptera, Chironomidae, Hymenoptera, Orthoptera, Mammals
Not many species, but not in the import format	Bryozoa, Tardigrada, Branchiura, Cumacea/Tanaidacea
Already done , to be checked and imported	Ostracoda, Mysidacea (to complete for genera), Hirudinea (To check for format), Bivalvia?, Halacaridae,
To be coordinated with already existing databases	Fish, Trichoptera, Isopods, Astacidea?, Amphibia?, Culicidae
NO answer	Branchiopoda non cladocera, Collembola, Lizards, Snakes, crocodiles, birds
Do not want to carry on	Syncarida, Turtles, Nematomorpha, Hydracarina (ok for analyses not for database)



Workshop Objectives

- Formating data files and completing the database for authors interested in contributing their data to the FADA database and web portal.
- Designing analyses on subsets of groups to draw interesting geographical or taxonomical results making use of the data gathered for the book
- Planning the drafting of an article to be submitted to high IF journal





Workshop organisation

First plenary

Introductory presentations:

- draw the international context,
- get some ideas on analyses carried out on some groups,

Round table discussion on the analyses

Afternoon: Break out groups

- 1- Hands-on session on the input files and the database
- 2- Discussion on the possible analyses: what we would like to do? , what we have? , what we can do?





Workshop organisation

«Practical» break-out group : hands-on
Input files and database:

- Work directly on your input file to format your data and try to import it in the test database.
- Identify issues and questions about the database and/or file format to be addressed in plenary.



Freshwater biodiversity



- Home
- Search
- Browse
- Groups
- About Fada
- Fada Book

RSS

Login
Register

Scientific Name Search

 type free text

Browse Taxonomical Tree

- ▼ Kingdom Animalia (unknown)
 - ▶ [Phylum Arthropoda \(unknown\)](#)
 - ▼ Phylum Rotifera Cuvier, 1817
 - ▼ Class Eurotatoria De Ridder, 1957
 - ▶ [Subclass Bdelloidea Hudson, 1884](#)
 - ▼ Subclass Monogononta Plate, 1889
 - ▶ [Superorder Gnesiotrocha Kutikova, 1970](#)
 - ▼ Superorder Pseudotrocha Kutikova, 1970
 - ▼ Order Ploima Hudson and Gosse, 1886
 - ▶ [Family Asciaporrectidae De Smet, 2006](#)
 - ▼ Family Asplanchnidae Eckstein, 1883
 - ▶ [Asplanchna Gosse, 1850](#)
 - ▶ [Asplanchnopus de Guerne, 1888](#)
 - ▶ [Harringia de Beauchamp, 1912](#)





Workshop organisation

Saturday:

- Debriefing on the results of the break-out groups and questions/issues to be addressed in plenary.
- Decision on keeping a plenary or splitting in break-out groups for the rest of the day

Sunday

- Tasks & Timeline

Acknowledgements

- The preliminary phase of FADA (2002-2003) was launched by DIVERSITAS and the « Centre National pour la Recherche Scientifique » (CNRS, France)
- FADA 1, 2, 3 are supported by the Belgian Federal Science Policy Office (BelSPO), the Belgian Biodiversity Platform and the Royal Belgian Institute of Natural Sciences (Brussels).

**Thanks a lot to the experts involved in FADA
for their motivation and enthusiasm!**

<http://fada.biodiversity.be>



