

SYSTEMATICS ASSOCIATION 6TH BIENNIAL CONFERENCE
28TH - 31ST AUGUST , 2007, EDINBURGH, UK

Floras and Faunas Thematic Session

Descriptive Taxonomy Serving Biodiversity

Thematic Session Outline

Floras and Faunas present data on organisms occurring within a geographic region. They establish a regional classification bringing order to past works, provide tools for identification through keys and descriptions, and record data on distribution ranges, ecology, conservation status. As one of the most applied research areas of biological sciences Floras and Faunas have long been acknowledged as critical for understanding the organisms of a region and, in recent years, as fundamental to the formulation of conservation strategies. Field guides build on the more technical Faunas and Floras and are an important means of disseminating information to a wider audience.

Electronic data management and dissemination has the potential to radically transform Flora and Fauna projects and diversify the users of these data. Online dissemination enables unparalleled access to, and offers novel means of presenting, data in a variety of formats tailored to specific user requirements. This symposium aims to bring together both scientists working on Flora and Fauna projects, including those producing field guides, and representatives from other user groups. The aim is to explore and discuss novel areas of research and create a more outward looking, integrated approach to Floras and Faunas which better serves the needs of the end users.

Overview

DAY ONE

Opportunity knocks: are the products of descriptive taxonomy fit for purpose?

Tues 28th August

- 13:00 Session 1: **The widening audience**
RBGE Lecture Theatre
- 15:00 Tea & Coffee Break
- 15:30 Session 2: **The products**
RBGE Lecture Theatre
- 17:30 End of session.
- 18.00 **Drinks reception & project demonstrations (electronic & printed)**
RBGE Exhibition Hall Annex

DAY TWO

New ways of handling data: the technical aspects

Wed 29nd August

- 09:00 Session 3: **Influence of technology on data gathering**
RBGE Lecture Theatre
- 10:30 Tea & Coffee Break
- 11:00 Session 4: **Interoperability & reuse of data: using new technologies**
RBGE Lecture Theatre
- 12.30 End of Thematic Session

DAY 1:

Opportunity knocks: are the products of descriptive taxonomy fit for purpose?

13.00 - 15.00 Session 1: The widening audience

Presentations will address the issues of the current and potential users of descriptive biodiversity data and the relevance of Floras, Faunas and field guides to a diverse audience. The objective is to stimulate discussion on the current perceived usefulness outside taxonomy and future avenues for development. Speakers are asked to address the following points.

Chair: welcome and brief introduction (5 minutes)

1.1 Keynote: Taxonomists' view of Floras and Faunas yesterday, today and tomorrow (30 + 5 minutes)

- Co-authored by a botanist & zoologist
- Floras and Faunas: why they are as they are
- Influence of production and publication techniques
- Changes in cultural attitudes to Floras and Faunas
- Interrelationships with monographic and phylogenetic research
- Impact? of Floras and Faunas: are taxonomic institutes ivory towers content with recording lost biodiversity

1.2 The Ecologists' Perspective (20 + 5 minutes)

- Requirements of ecologists
- Usefulness of current outputs of Floras and Faunas
- Examples of best practice in Floras and Faunas
- What is needed from descriptive taxonomy
- What can be fed back into descriptive taxonomy

1.3 The Conservation Biologists' Perspective (20 + 5 minutes)

- Requirements of global and local conservationists
- Usefulness of current outputs of Floras and Faunas
- Examples of best practice in Floras and Faunas
- What is needed from descriptive taxonomy
- What can be fed back into descriptive taxonomy

1.4 The Publishers' Perspective (20 + 5 minutes)

- Requirements of publishers, market/audience for descriptive biodiversity data
- Usefulness of current outputs of Floras and Faunas
- Examples of best practice in Floras and Faunas
- What is needed from descriptive taxonomy
- What can be fed back into descriptive taxonomy

15.30 - 17.30 Session 2: The products

Following on from the first session, this session looks in detail at current outputs of descriptive taxonomy ranging from technical Floras and Faunas to popular field guides. In a series of short presentations speakers are asked to discuss the design and content decisions behind both printed and electronic publications with a view to stimulating discussion resulting from the issues raised in the first session. Although speakers can use images of their systems to illustrate their talks they should refrain

The presentations will be followed by an evening drinks reception during which these products can be looked at in more detail and discussions continued.

Introduction from the Chair (5-10 minutes)

Introduction leading from Session 1 into Session 2

Presentations of Flora and Fauna outputs (7 x 10+5 minutes each)

A series of short presentations illustrate a variety of printed and electronic Flora, Fauna and field guide outputs. Rather than give a detailed demonstration of their products, speakers are requested to address the following questions on design using examples drawn from their work.

- What were the drivers for producing the output?
- What is the intended audience?
- How were user requirements assessed?
- What influenced the media format(s) selected?
- What arrangement and layout was used and why?
- What kinds of data* are included/excluded and why?
- What are the considerations for longevity and reusability of the data?
- How is the descriptive information presented** and why?
- What identification tools were used and why?

*e.g. specimen citations, detailed nomenclature, types.

** e.g. technical/non-technical format, language, images.

Speakers will be requested to provide a one-page summary of these issues that will be freely available for download. Projects which are not able to give a presentation can send their product with a summary page for inclusion in the evening demonstration.

7.30 onwards EVENING DRINKS RECEPTION

Discussions over drinks, demonstrations and showcasing of electronic and printed descriptive taxonomic outputs, posters etc. Held in the classroom off the exhibition hall. There is also a main drinks reception in the arid house and exhibition hall at the same time so will allow folk to mingle in and out.

DAY TWO

New ways of handling data: the technical aspects

9.00-10.30 Session 3: Influence of technology on data gathering

The technologies available, subsequent use of data and cultural attitudes have greatly affected the kinds and volume of data gathered whilst undertaking field research. In some disciplines specimens are still the primary objective of field research where as in others unvouchered observational records or images serving as vouchers are the norm. Over time there is a shift in importance from the specimen (label) being the primary place of data storage to other linked resources (e.g. images, database entries). This session examines these changing aspects of field research and the influence of technological advancements in what and how data are recorded.

Remarks from the Chair: introduction (5 minutes)

3.1 Keynote lecture: The Changing Role of Collections and Field Research (30 + 5 minutes)

- Co-authored by a botanist & zoologist
- Historical changes in data recorded with/on specimens
- Influence of technology on the kind, extent and recording of data
- Roles of observational and vouchered data
- Cultural changes in data collection and management
- Changes in use of digital images

Presentations from 4 current field researchers (4 x 15 + 5 minutes each)

Talks from those currently or recently involved in field research cover the following:

- How were collecting sites selected?
- What are the drivers behind the kinds of collection made (e.g. specimens of observations, images)?
- How have technologies changed working practices?
- Use of digital photography in the field
- Use of electronic data capture in the field
- Have working practices changed to increase the generalised scope of the data collected (e.g. for reuse by others)?
- How are data integrated into data management systems when back at base?

11.00 - 12.30 Session 4: Interoperability & reuse of data: using new technologies

The integration and interoperability of Flora and Fauna data are key to its longevity and reuse. Several current and emerging technologies can extend the usefulness of these data beyond the basic structure of word processor documents and so hugely adding value to the outputs. The presentations in the final session present the important technologies now available and those being tested, with perspectives and possibilities for the future.

Remarks from the Chair: introduction (5 minutes)

4.1 Adding value to Flora and Fauna outputs (20+5 minutes)

- XML markup
- TAXMLIT, Digger, TAPIER, etc.
- Unit level storage compared to storage of synthesised data
- Data mining, semantic web

4.2 Facilitating data exchange within institutes and globally (20+5 minutes)

- Globally Unique Identifiers: what they are, how they are administrated and what benefits there are.
- GUIDs for taxon names (e.g. Zoobank), taxon concepts, specimens, etc.
- Connections with GBIF

4.3 Scope for use of data by broad web projects (20+5 minutes)

- iFloras
- Species Banks/Species pages
- Wiki approach
- Encyclopaedia of Life

Discussion and concluding remarks (10 minutes)