



Joint PGR Secure/ECPGR workshop
Conservation strategies for European crop wild relative
and landrace diversity



CWRIS: THE PGR FORUM INFORMATION MANAGEMENT MODEL

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WHAT IS CWRIS?

1. A model for the management of data associated with CWR conservation
2. Access to taxon information via the online system

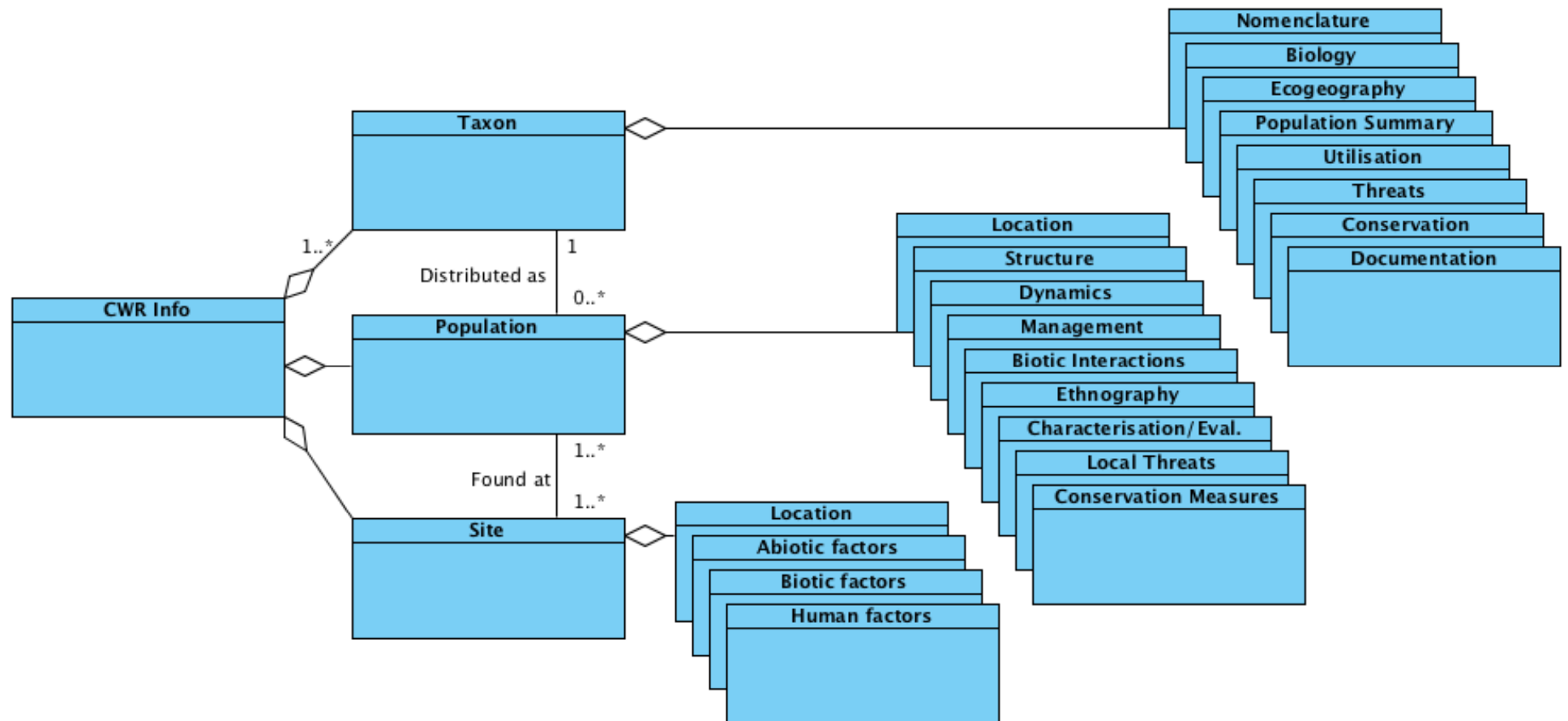


<http://www.pgrforum.org/cwr/cwr/cwr.asp>

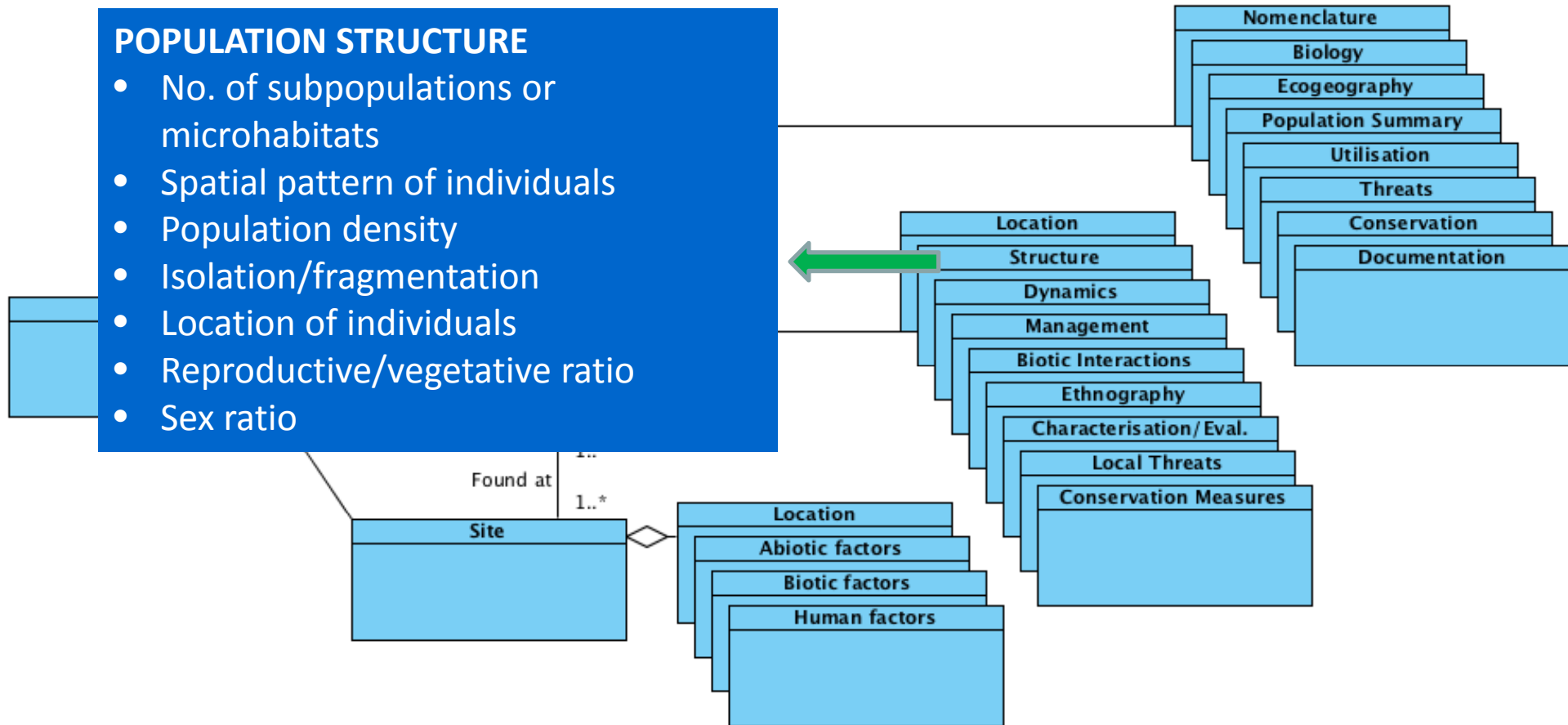
DEVELOPMENT OF THE MODEL

- Initiated by, and developed in the context of the EC FP5 project, PGR Forum
- An iterative process of review and refinement through a series of workshops, project working groups and a user testing panel
- Information management model tested with case studies in the online data entry module
- CWRML (CWR Markup Language) published (Moore *et al.* 2008)

BASIC STRUCTURE OF THE MODEL



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The descriptors provide the structure within which existing data can be accessed, mapped on to the data model, or communicated, and in which novel data can be collated

LEVEL 3 DATA STANDARDS

- Each level 3 descriptor is assigned data standards to enforce consistency in data recording, storage and retrieval
- Existing data standards were utilized in the model where possible and appropriate (e.g., EUNIS Habitat Types and the IUCN Habitats Authority file)
- However, there were a number of data types for which new data standards were required, or existing ones adapted (e.g., novel standards were proposed for breeding system, pollination mechanism and plant habit)
- In a few cases, where no suitable standard exists, or enforcing a limited choice of attributes is not appropriate, the model allows for the inclusion of free text elements

ONLINE CASE STUDIES

The screenshot shows a web browser window displaying the PGR Forum website. The address bar shows the URL: <http://www.pgrforum.org/cwr/cwr.asp?fact=48>. The page features a navigation menu on the left with links for Home, Taxonomy, People, Links, Search, About, and PGR Forum. A table of attributes is displayed, and a list of references is shown on the right.

Pollination	insect
Reproductive system	sexual
Breeding system	mixed
Flower/plant sex structure	hermaphrodite
Life form	hemicryptophyta
Life span	13 years
Habit	rosette

Original source of data: [Female reproductive success of the narrow endemic Erodium paularense \(Geraniaceae\) in contrasting microhabitats](#)

Person entering data: [Jose Iriondo](#)

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Referencing system

- Object attributes linked to resources
- Different reference classes
- Any data item can be linked to any number of references

To test and refine the model

CWRML

```
targetnamespace="http://www.pgforum.org/cwr" >
- <annotation>
  <documentation> International Crop Wild Relative information schema Release 2.2 05/02/2008 Moore, J.D., Kell, S.P., Maxted, N., Iriondo, J.M., Ford-Lloyd, B.V. and contributors Copyright 2005-2008 University of Birmingham, United Kingdom. All rights reserved. </documentation>
</annotation>
<element type="cwr:CWRInfoType" name="CWRInfo"/>
<element type="string" name="comment"/>
- <complexType name="CWRInfoType">
  - <sequence>
    <element type="cwr:Nomenclature" name="Nomenclature"/>
    <element type="cwr:Biography" name="Biography" maxOccurs="1" minOccurs="0"/>
    <element type="cwr:Ecogeography" name="Ecogeography" maxOccurs="1" minOccurs="0"/>
    <element type="cwr:PopulationSummary" name="PopulationSummary" maxOccurs="1" minOccurs="0"/>
    <element type="cwr:Utilisation" name="Utilisation" maxOccurs="1" minOccurs="0"/>
    <element type="cwr:Threats" name="Threats" maxOccurs="1" minOccurs="0"/>
    <element type="cwr:Conservation" name="Conservation" maxOccurs="1" minOccurs="0"/>
    <element type="cwr:Documentation" name="Documentation" maxOccurs="1" minOccurs="0"/>
    <element type="cwr:Sites" name="Site" maxOccurs="1" minOccurs="0"/>
    <element type="cwr:Populations" name="Population" maxOccurs="1" minOccurs="0"/>
    <element minOccurs="0" ref="cwr:comment"/>
  </sequence>
</complexType>
- <complexType name="Nomenclature">
  <!-- TDWG syntax -->
  - <sequence>
    <element type="string" name="ScientificName"/>
    <element type="string" name="Genus"/>
    <element type="string" name="FirstEpithet"/>
    <element type="string" name="SecondEpithet"/>
    <element type="string" name="Rank"/>
    <element type="string" name="HybridFlag"/>
    <element type="string" name="AuthorTeamParenthesis"/>
    <element type="string" name="AuthorTeam"/>
    <element type="string" name="CultivatedPlantNameElements"/>
    <element type="string" name="PrincipalSynonyms"/>
    <element type="string" name="BotanicalType"/>
    <element type="string" name="Vernacularname"/>
  </sequence>
</complexType>
- <complexType name="Biology">
  - <sequence>
    <element type="cwr:Reproductivesystem" name="Reproductivesystem"/>
    <element type="cwr:Breedingssystem" name="Breedingssystem"/>
    <element type="cwr:Flowerplantsexstructure" name="Flowerplantsexstructure"/>
    <element type="cwr:Pollination" name="Pollination"/>
    <element type="cwr:Lifeform" name="Lifeform"/>
    <element type="string" name="Lifespan"/>
    <element type="cwr:Habit" name="Habit"/>
  </sequence>
</complexType>
```

Forms the basis of a syntax for formatting data on CWR for exchange and dissemination