



Dynamism and relationship between conservation listing and taxonomy in the Iberian vascular flora

Felipe Domínguez Lozano, Juan Carlos Moreno Saiz
& Helios Sainz Ollero

UAM



The debate

- “Many taxonomists spend most of their career trying to interpret the work of nineteenth century systematicists” Godfray, *Nature* 2002
- “Taxonomic knowledge is very incomplete. Most species await description, whereas other taxa have been redescribed many times” (Isaac et al., *TREE* 2004)



The Conservation gap

- “(conservation organizations) are busy forging alliances with the business community to encourage good environmental practice but so far they have done little to engage botanical institutions” (Lowry & Smith, *Cons. Biol.* 2003)
- “there is a lack of appreciation by some conservationists of the importance of taxonomic status in identifying conservation targets” (Golding & Timberlake, *Cons. Biol.* 2003)



Solutions

- “The documentation of life on Earth surely deserves to be among our most urgent priorities for investment” Blackmore, *Science* 2002.
- “Imagine a taxonomic renaissance built on a foundation of cyber-infrastructure” Wheeler, et al., *Science* 2004



How much dynamic taxonomy has to be to match with plant conservation dynamic?

1. How many species are we “discovering” every year?
2. Is there a real gap between taxonomy and plant conservation?
3. Which are the trends in Spanish threatened flora?



Raros Taxa Raros Ibéricos

Taxonomy Distribution Official protection Categories of threat

Search by genus:

Consulta Formulario Taxonomía

Taxonomy

AUTHOR : **Family:**

Publication: **Comments:**

Year: 284 point out to *C. pygmaea* L. as probable parental

Synonymy of

Record: of 1 (Filtered)

Record: of 7

Record: of 2344



1984

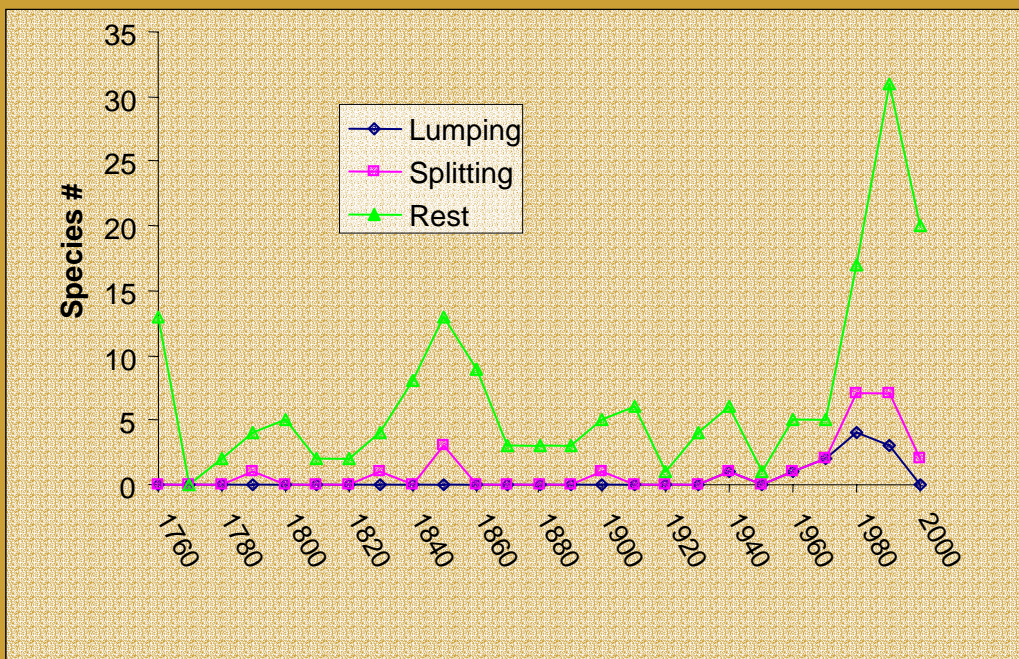
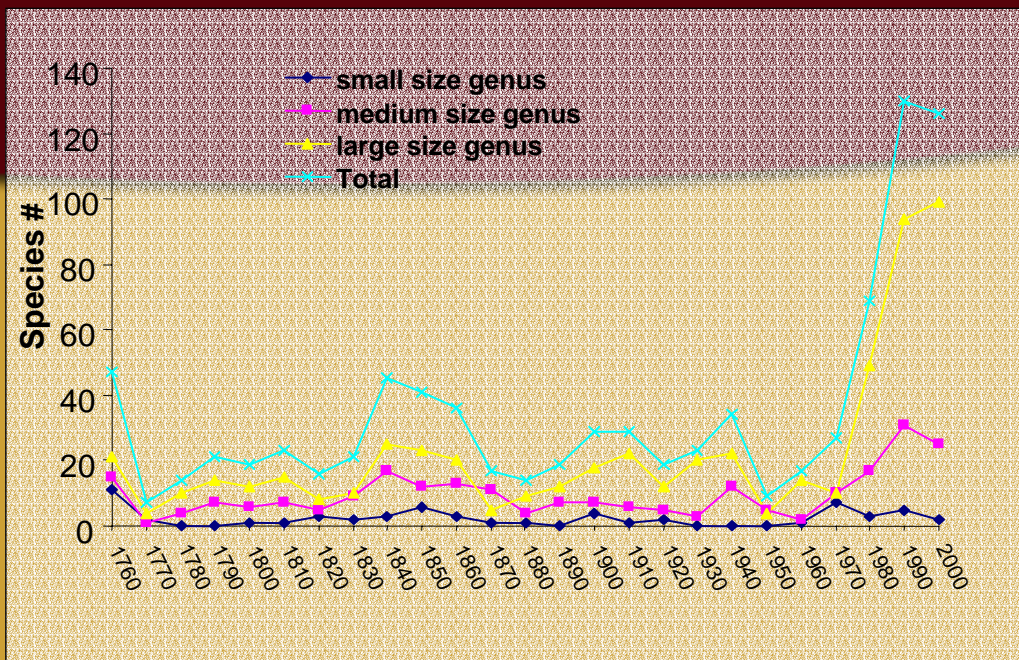


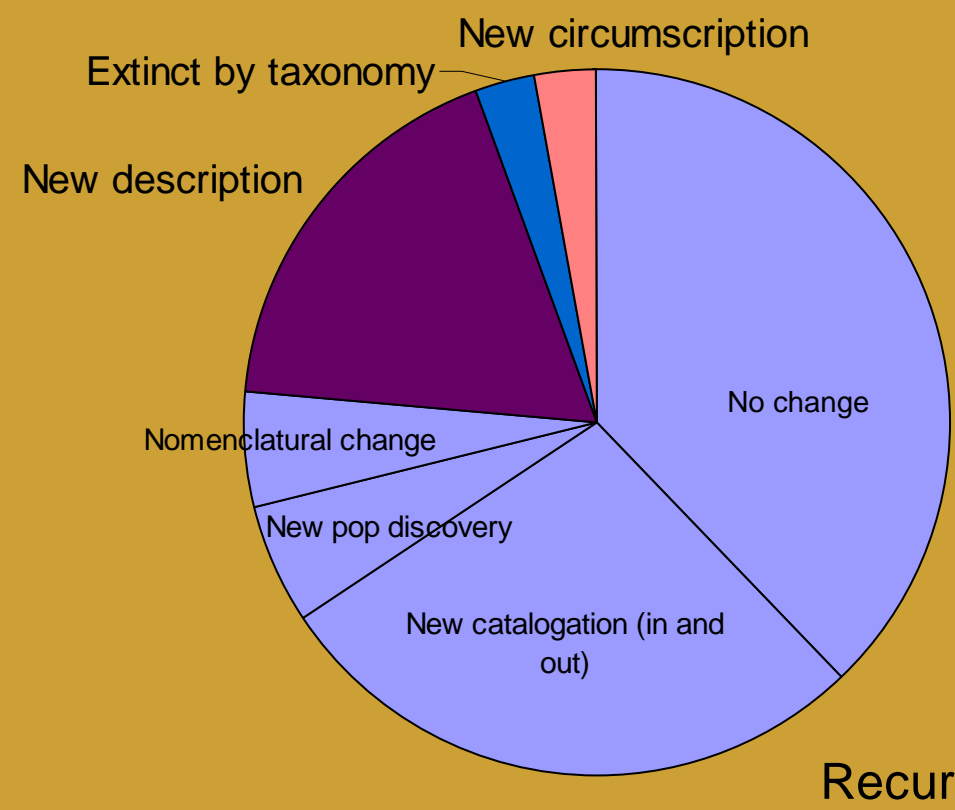
1133 taxa

2000



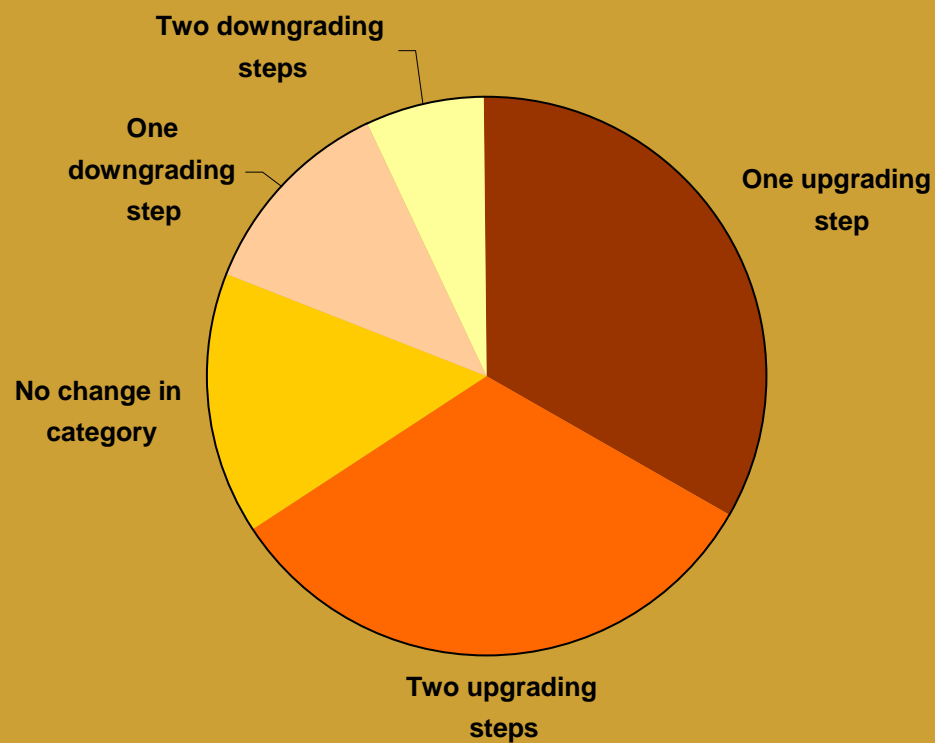
1419 taxa





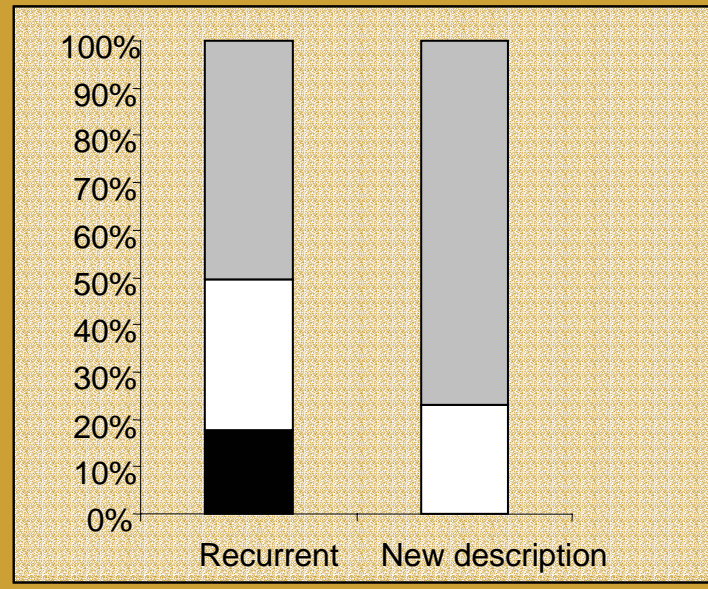
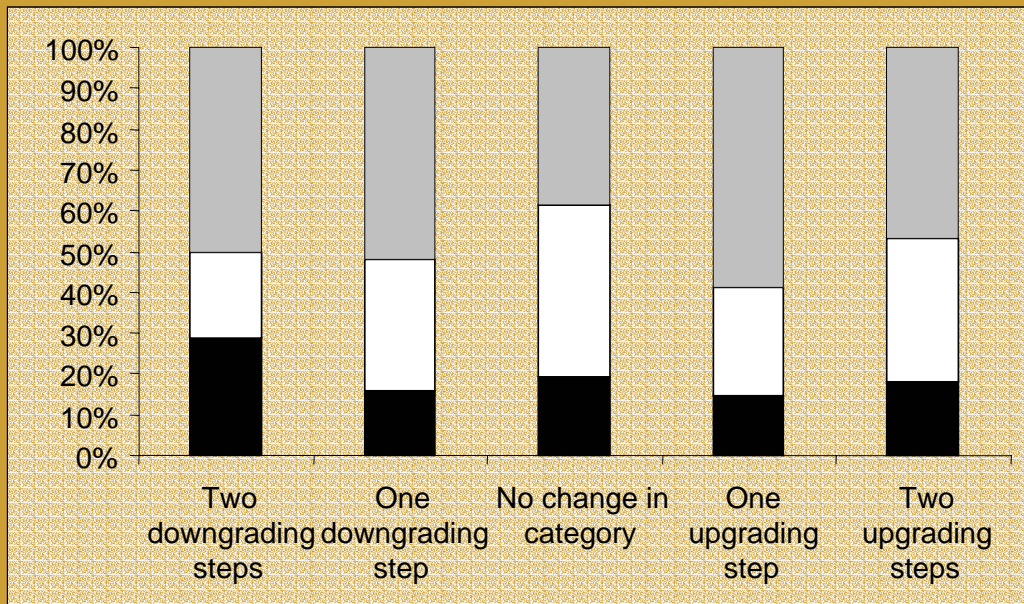
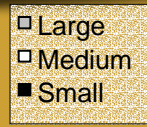
1984 list	151
2000 list	266
	417

Recurrent



Mean = 0.72

SE = 0.086





1. Fine-scale taxonomy is prevalent in current taxonomic work.
2. Conservation follows taxonomy: new species in the red list come from fine-scale taxonomy.
3. Iberian threatened flora is becoming more threatened.

Caveats

Unbalanced phylogenetic representation in red lists.

Risk of not being effective with scarce conservation resources.



What can  do?

Go monitoring !!!

**Development of accountability system
to prevent phylogenetic unbalance**

**Identifying some indicator to measure
change in conservation status using
IUCN categories**



Thank you