

INPLANBEL

Partim NATIONAL BOTANIC GARDEN OF BELGIUM

CATALOGUE OF
NEOPHYTES IN BELGIUM
(1800-2005)

1. Introduction:

- A comprehensive list of alien species is an essential tool for the study of plant invasions
- Through the INPLANBEL-project such a list is compiled for the first time at the national scale for Belgium

2. Materials and methods

- Thorough and critical revision of major Belgian herbaria (+ 25.000 specimens revised)
- All specimens databased
- Scan reproduction of a representative specimen for each taxon from the catalogue
- Compilation of a comprehensive database of neophytes in Belgium

Catalogue of neophytes in Belgium (1800-2005)

Extract from the catalogue:
(data provided)

Taxon	Family	M/I	FR	MRR	Origin	Presence			D/N	V/I
						Fl.	Br.	W.		
<i>Solidago canadensis</i> L.	Asteraceae	D	1863	N	NAM	X	X	X	Nat.	Hort.
<i>Solidago gigantea</i> Ait.	Asteraceae	D	1869?	N	NAM	X	X	X	Nat.	Hort.
<i>Solidago graminifolia</i> (L.) Salisb.	Asteraceae	D	<1900	1978	NAM	X		X	Cas.	Hort.
<i>Solidago rugosa</i> Mill.	Asteraceae	A	1883	2005	NAM	X	X		Cas.	Ore

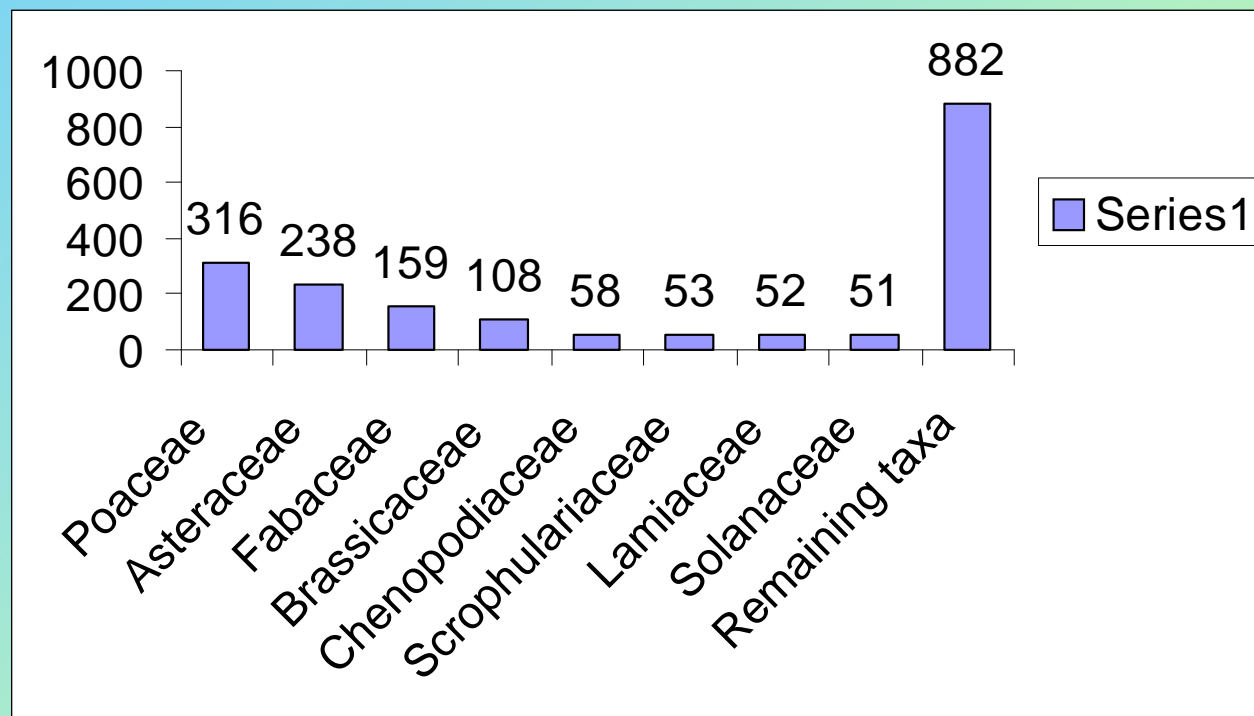
3. Results:

- 1917 taxa included in the catalogue
 - 366 (=19%) for the first time recorded for the Belgian territory
 - 29 taxa were erroneously recorded for Belgium

- Some general results:

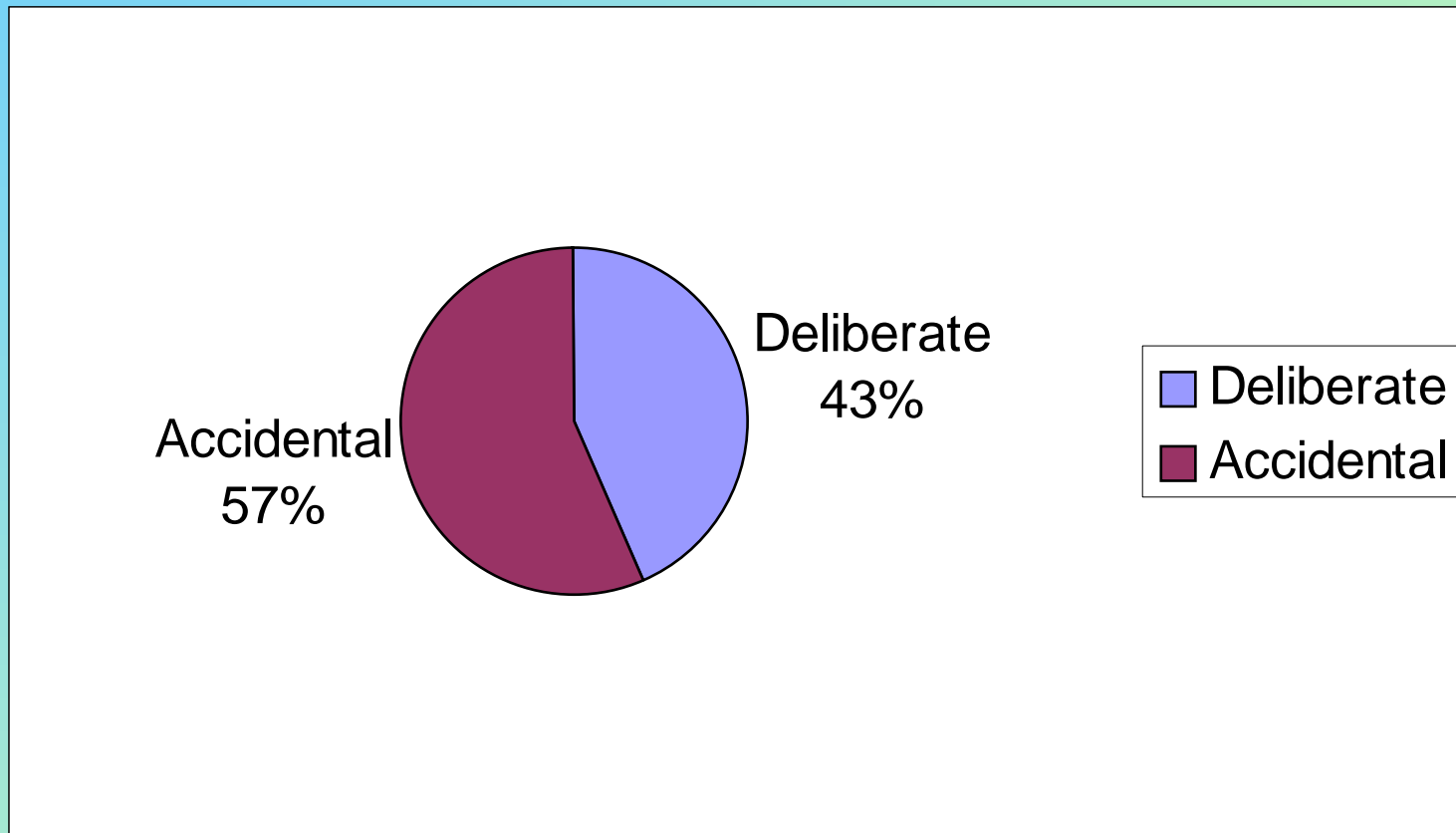
A. Taxonomic diversity:

Poaceae and *Asteraceae* best represented



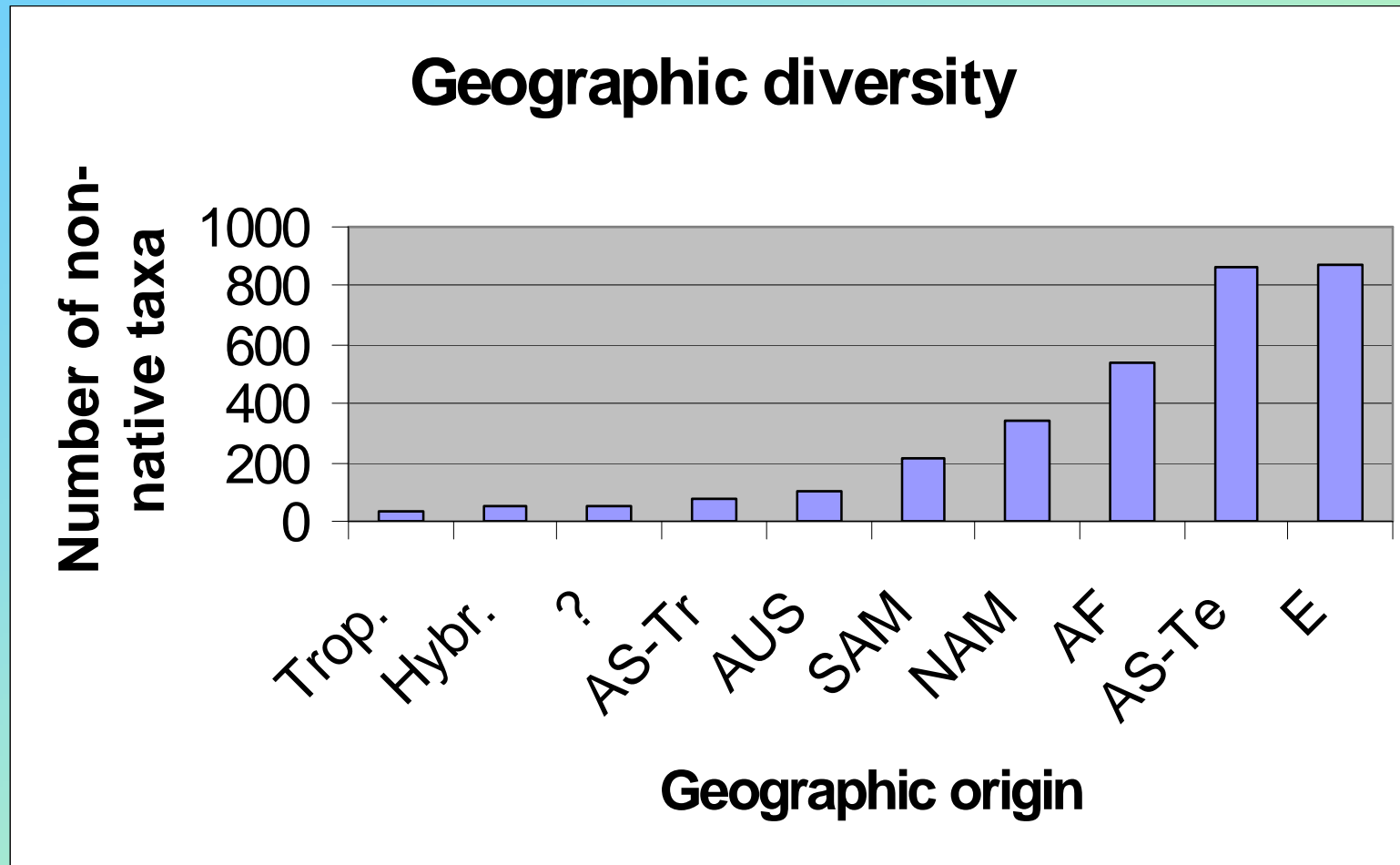
B. Mode of introduction

deliberate introductions important



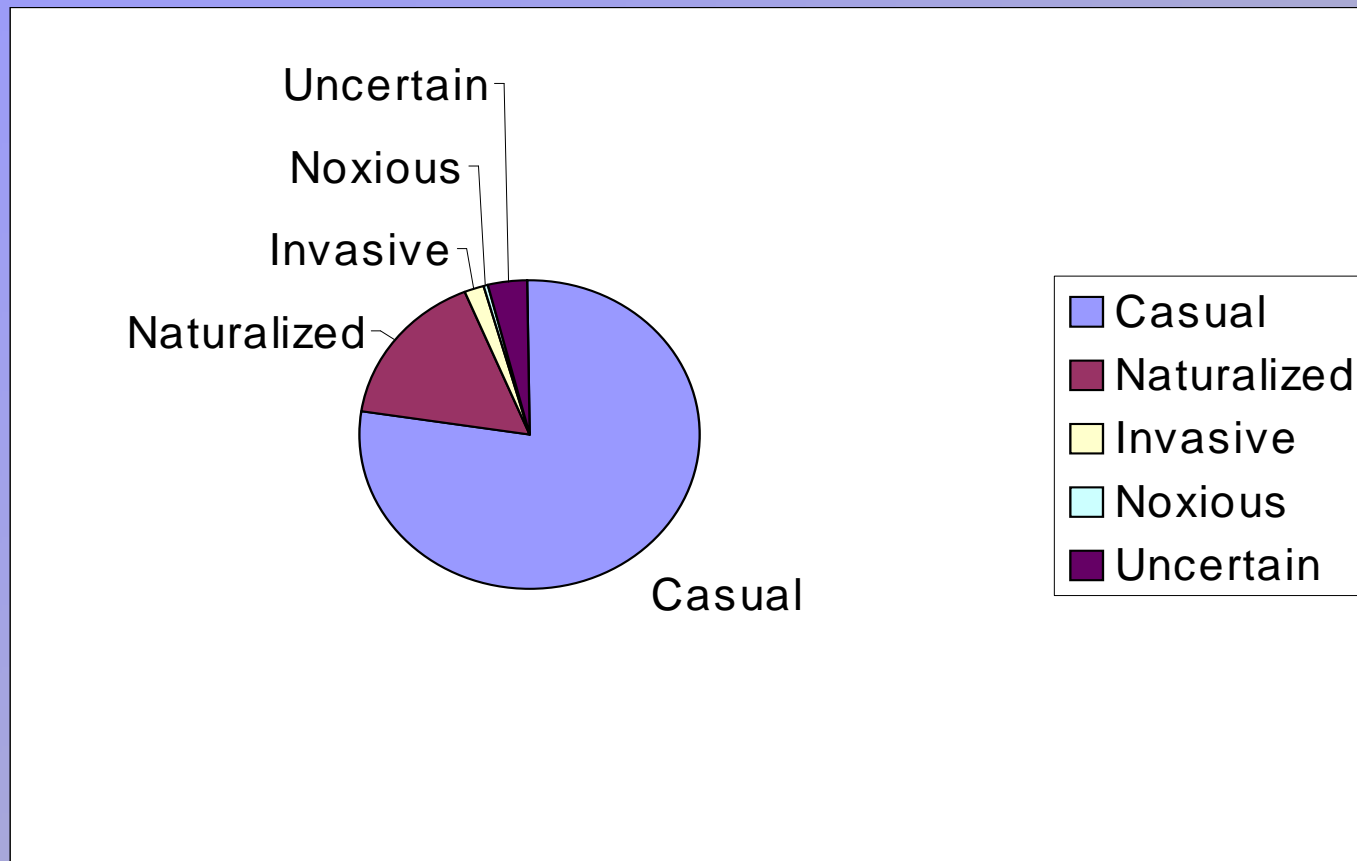
C. Geographic diversity

Eurasian element prevails



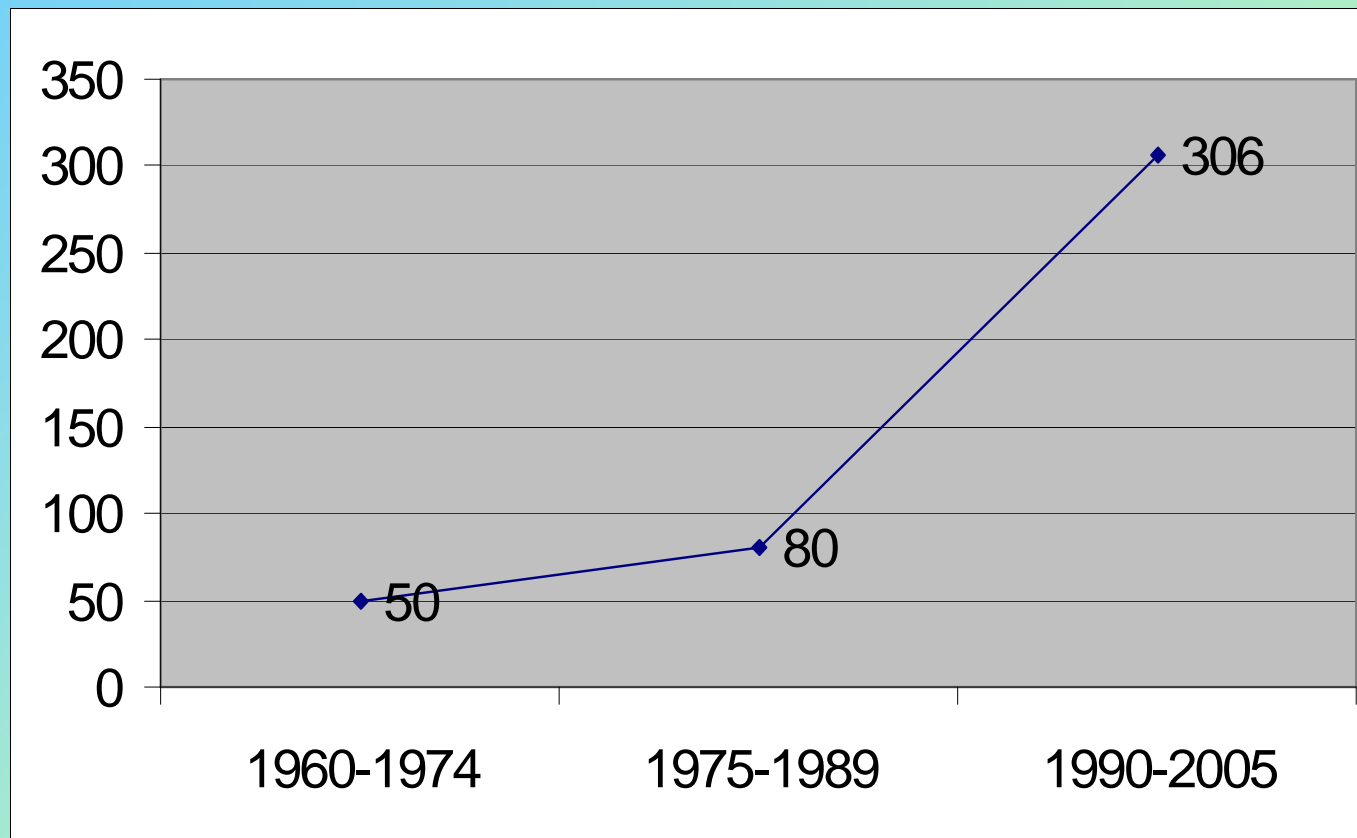
D. Degree of naturalization

numbers of invasive and naturalized taxa restricted



E. Trends

number of newly introduced taxa is increasing



- Some specific results concerning naturalized/invasive taxa:

The number of taxa penetrating in (semi-)natural habitats (= invasive taxa) is small:

< **2%** of the number **of all introduced taxa**

± **10,5%** of the total number **of naturalized taxa**

The number of invasive taxa causing damage in various areas perhaps limited to 8:

Fallopia japonica, *Heracleum mantegazzianum*,

Hydrocotyle ranunculoides, *Impatiens glandulifera*,

Ludwigia grandiflora, *Prunus serotina*, *Rhododendron ponticum* and *Rosa rugosa*

**More than 61% of the naturalized taxa
and 100% (!) of the noxious invasive taxa
are originally deliberate introductions**

4. Major conclusions

- The number of introductions increases
- Only a small portion of the introductions (ca. 18%) is able to naturalize
- The number of taxa penetrating and proliferating in (semi-) natural habitats is very restricted (ca. 2%).

- Only about 8 taxa cause severe damage in various respects for the time being
- All noxious taxa and a major part of the naturalized taxa have been deliberately introduced by man