

Cibotium barometz in China

Zhang Xian-Chun

The National Herbarium of China
Institute of Botany
Chinese Academy of Sciences
Beijing

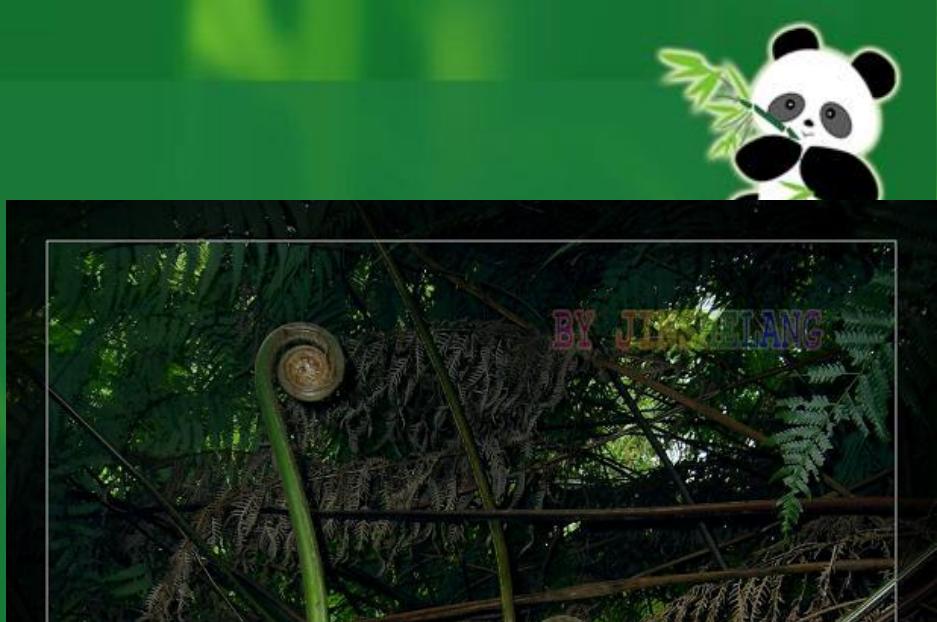




Cibotium barometz & CITES

- ❖ Pteridophytes
- ❖ Cibotiaceae (2006, before Dicksoniaceae)
 - ❖ *Cibotium*, ca. 14 species.
 - ❖ *Cibotium barometz*, tropical Asia.
 - ❖ CITES Appendix II.





Raw material of *Cibotium barometz* on local market



Local herb market



本草纲目
中医之宝
小病大病
调理身体
上火调理
润喉止咳
不透风
咽喉肿痛
治疗效果好



Dry rhizome “Gouji” in herb market





Product of “Gouji”





Field plot-survey

- ❖ The distribution of *Cibotium barometz* in China is uneven. We selected sample plots from several provinces and in each province a few counties were selected.
- ❖ By field plot-survey method, combined with experience of local people, we can estimate the biomass of rhizomes of *Cibotium barometz* in provinces and districts.



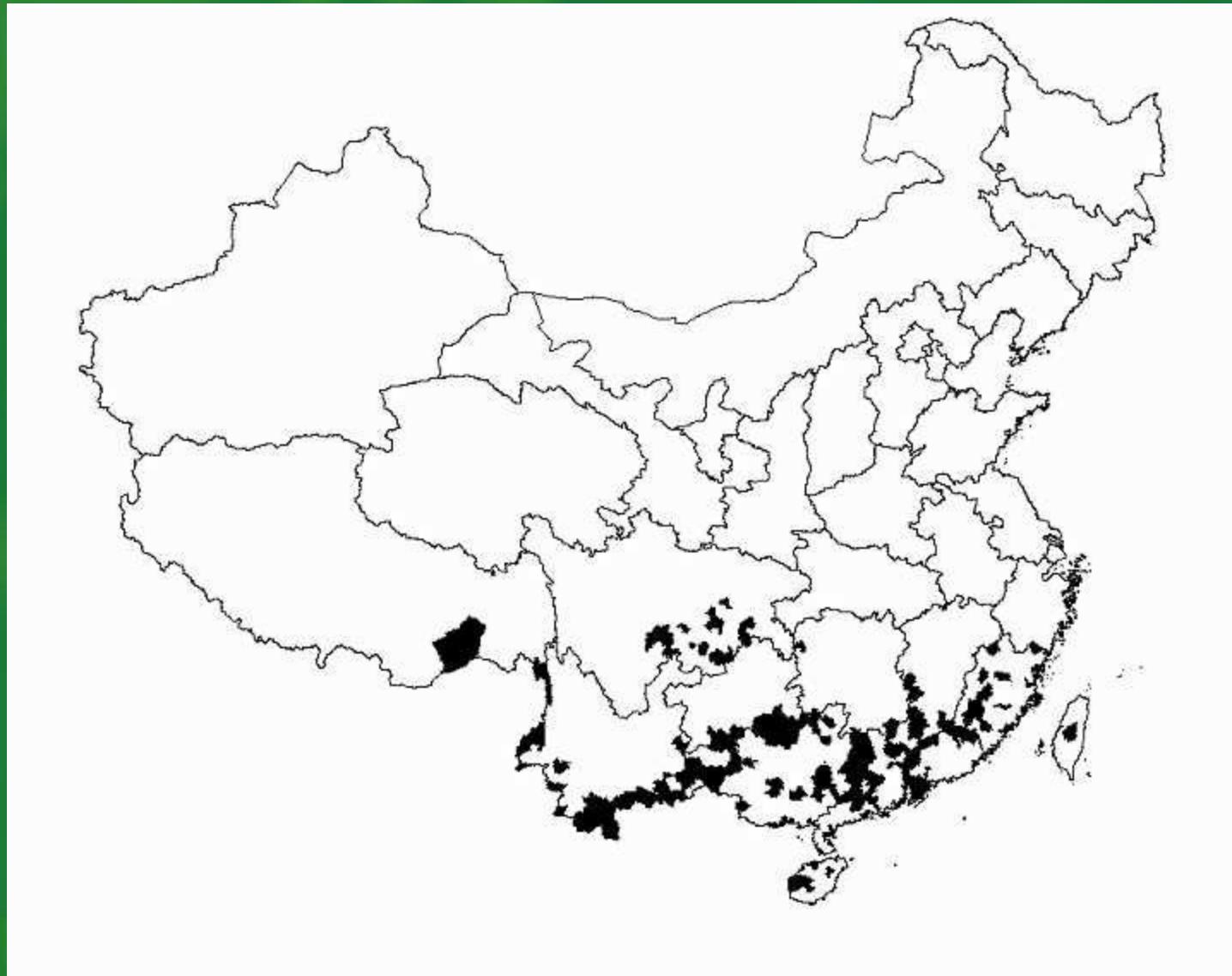
Field plot-survey

- ❖ We then made rather conservative estimations of the quantity of dry rhizome “Gouji” deposits in the major distribution provinces and districts.
- ❖ For most rhizome-harvested plants, the annual sustained yield is estimated at about 10% of the standing stocks.





Distribution of *Cibotium barometz* in China





Field Survey Areas





Biomass estimates

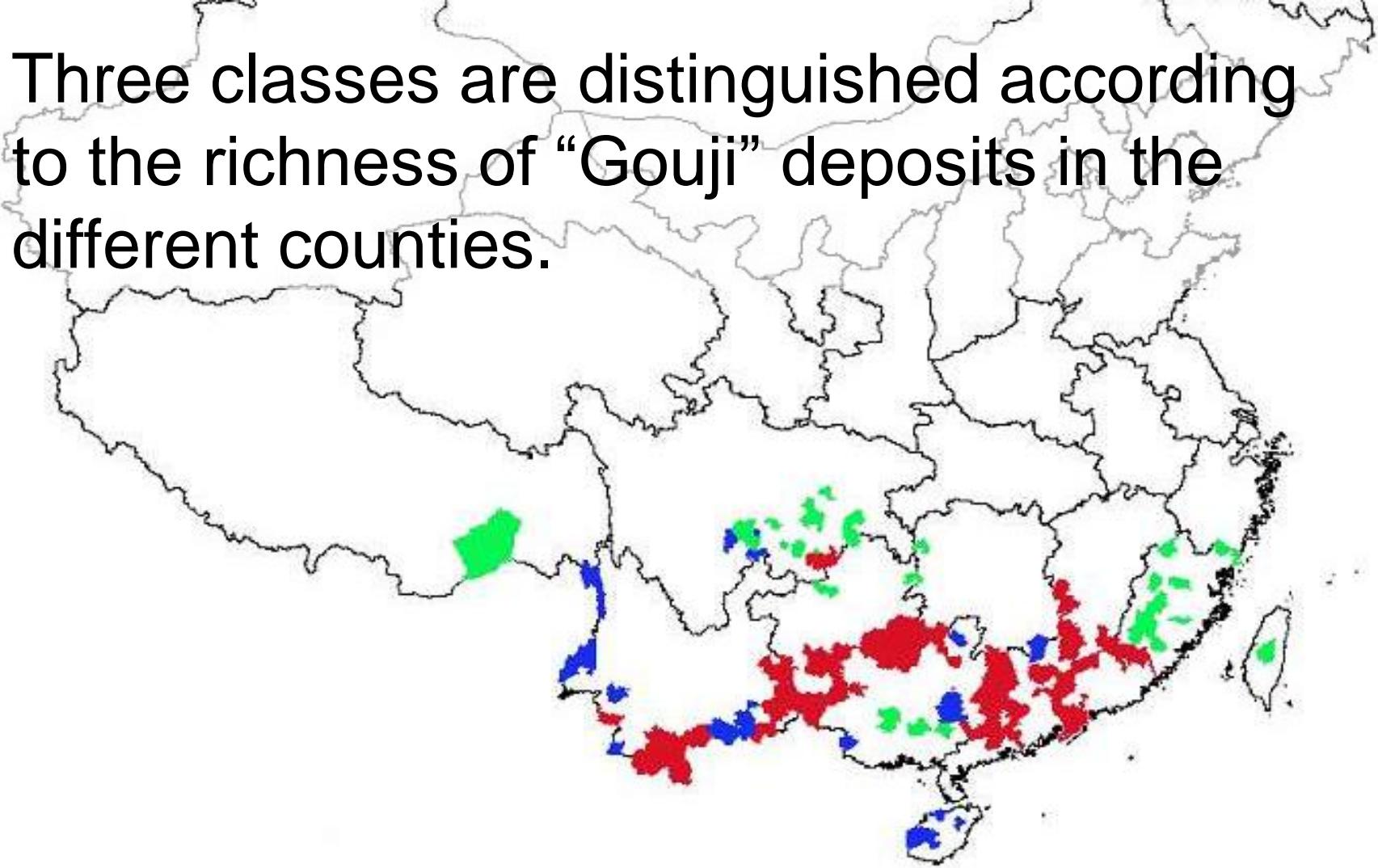
- ❖ According to our estimation, there are about 391,400 tons of deposits of “Gouji” in China, mainly distributed in Guangdong, Guangxi, Yunnan, Guizhou, and Sichuan.
- ❖ Ca. 3 kg fresh rhizome yield 1 kg dry rhizome.

Biomass of the rhizome of *Cibotium* in China



Guangdong	9,820,000 (kg)
Guangxi	9,120,000
Yunnan	7,520,000
Guizhou	6,000,000
Sichuan	3,240,000
Hainan	1,800,000
Fujian	1,100,000
Jiangxi	500,000
Chongqing	40,000
	39,140,000 (kg)

Three classes are distinguished according to the richness of “Gouji” deposits in the different counties.



----- the **red color** areas represent the highest deposits, **blue areas** the medium, and **green areas** represent the lowest deposits. Areas with the highest deposits of “Gouji” are in western Guangdong, northern Guangxi and southern Yunnan.

Export of C. barometz from 1993 to 2004



Year	Mainland (kg)	Hong Kong (kg)	
1993	4,000	0	
1994	35,100	15,000	
1995	292,000	147,000	
1996	13,750	6,000	
1997	0	12,000	
From 1998 to 2000 without export			after 2000, annual export limit to 130,000
2001	0		
2002	18,587		
2003	31,844		
2004	6,817		+ 120 living plants
2005	3,014.5		
2006	21.53		
2007	0		
2008	0		

Evaluation of data quantity and quality for the assessment



- ❖ The estimated deposit of natural resources might not be very accurate because of the difficulty of field survey and the limitation of sampled populations in its vast distribution areas.
- ❖ Our field studies were conducted between 1997-1998, and no data were collected afterwards.
- ❖ From our field trips in recent years, we found the natural vegetation are getting better in most parts of China because of the forest restoration project.
- ❖ For most rhizome-harvestable plants, the annual sustained yield is estimated at about 10% of the standing stocks. The export quota of 130 tons per year is reasonable.

Main problems, challenges or difficulties found on the elaboration of NDF



- ❖ The plants are widely and unevenly distributed throughout China south of the Yangtze River, our field survey is still very limited.
- ❖ It is hoped that international and national agencies will help with investigation of artificial cultivation, artificially promoting natural regeneration, and new medicinal products in order to reduce the pressure on wild resources of this much exploited species.



www.NEOLiNGLiNG.com

A scenic landscape featuring a range of mountains. The peaks in the background are partially obscured by a thick layer of white mist or clouds. In the middle ground, there are more mountain ridges covered in dense green forests. The foreground is dominated by the dark, silhouetted shapes of trees and bushes. A bright, possibly sunlit area is visible on the left side, creating a strong contrast with the darker areas.

Thanks 謝謝！