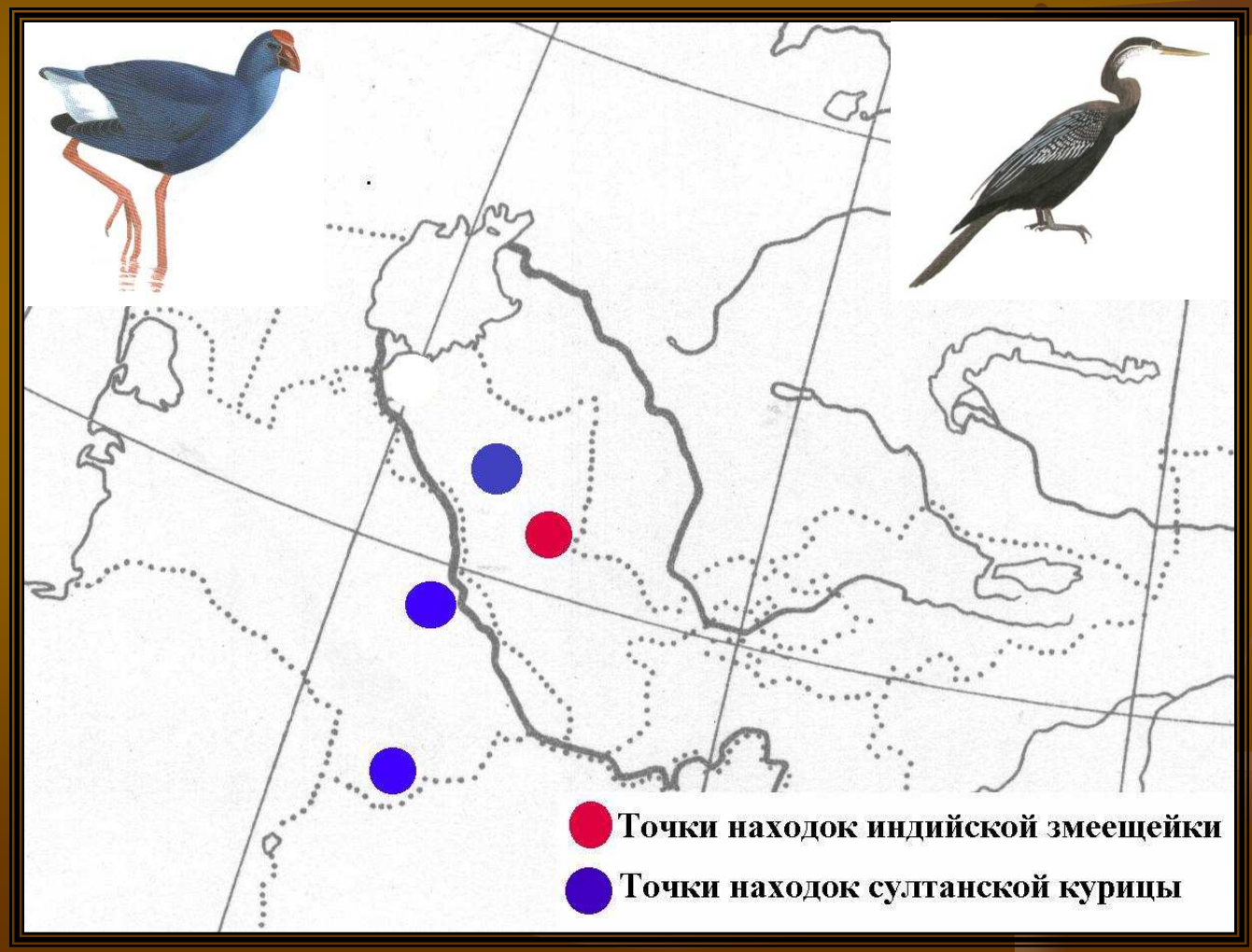
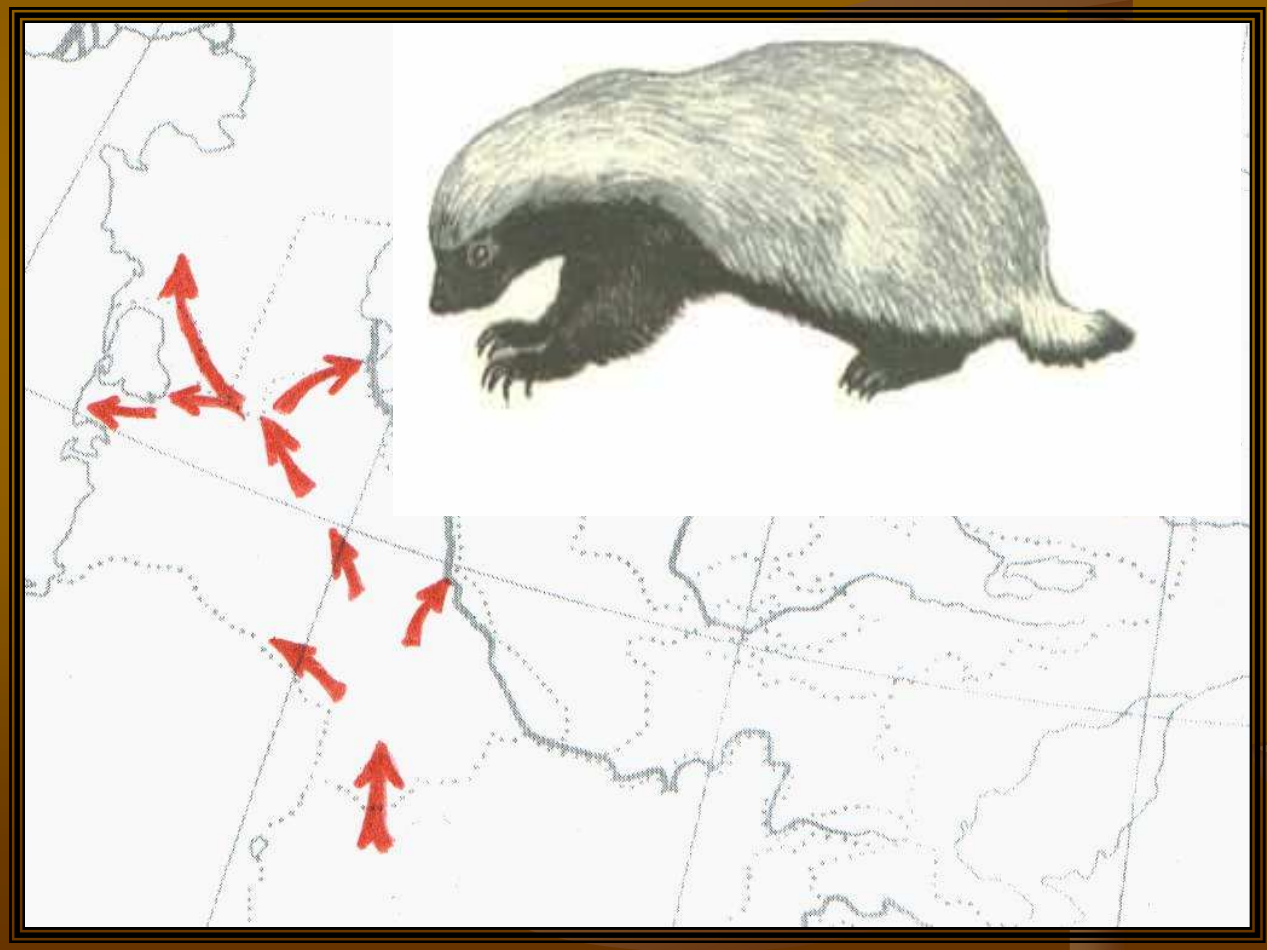
Impact of climate change to biodiversity in Uzbekistan

Irregular visit to the north from breeding place of north-asian water birds

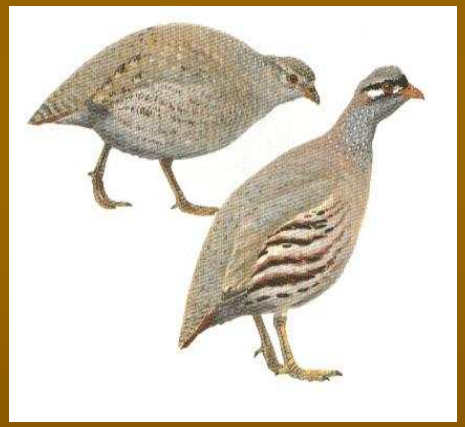


Expansion to the north south-asian species for breeding, which resulted origin north isolate

Expansion to the north south-asian species, which result of warmer winter



Reduction of area of south-asian species in Central Asia

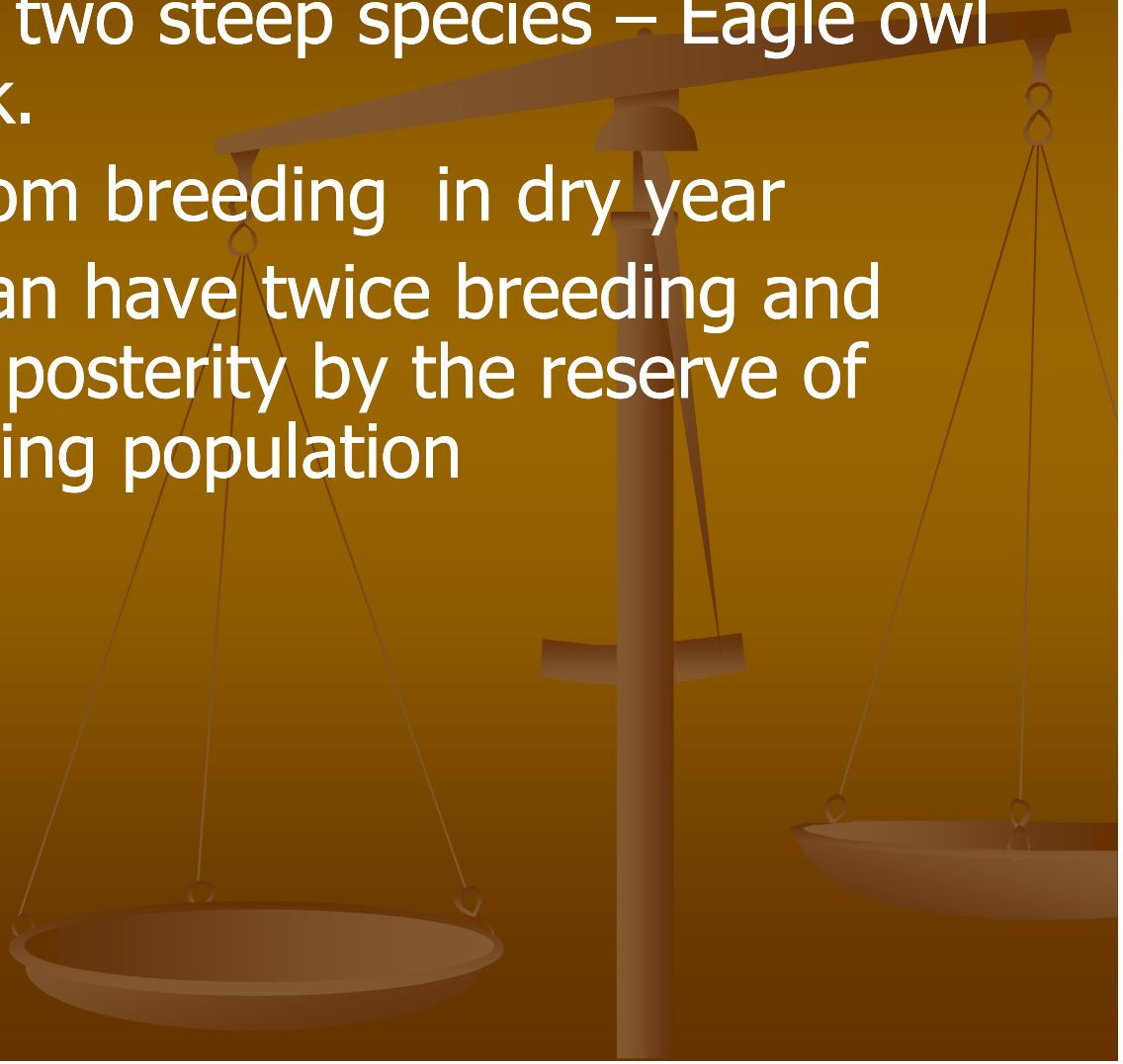


Reduction of area of south-asian species in Central Asia

New ecological adapters

This example for two steep species – Eagle owl and Yellow suslik.

- They can refuse from breeding in dry year
- In wet year they can have twice breeding and produce biggest posterity by the reserve of young not breeding population



New ecological adapters

Occurrence of wintering in reproduction areas, development of settled way of life:

= substantial increase of number - Turkestain white stork;

= grateful increase of number in connection with settled way of life and considerable lengthening of the period of nesting – Common myna;

= expansion to the north wintering area of many water birds

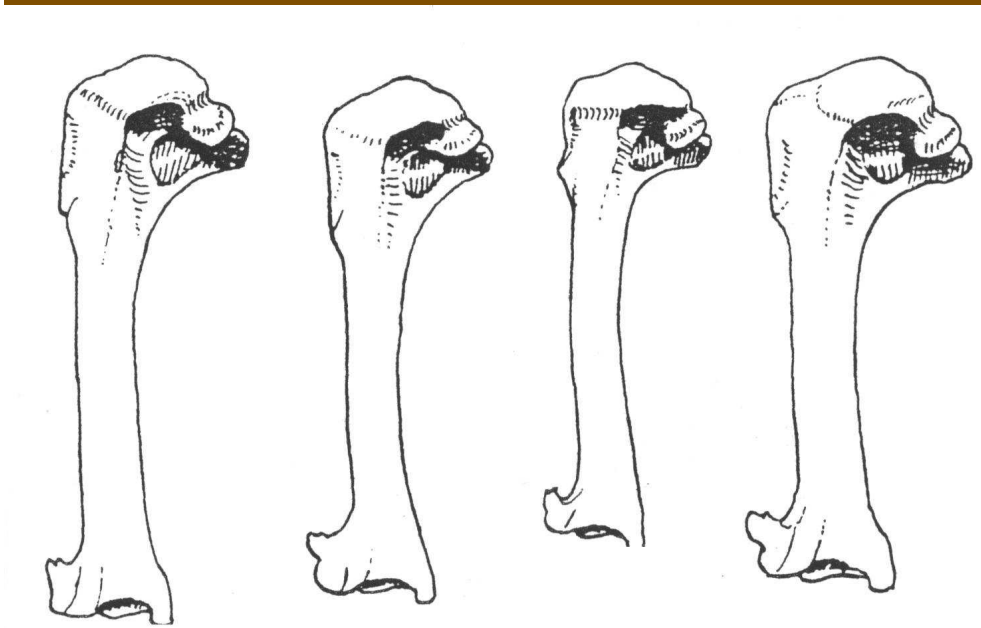
= expansion to the south the nested area of this species which stay here from wintering

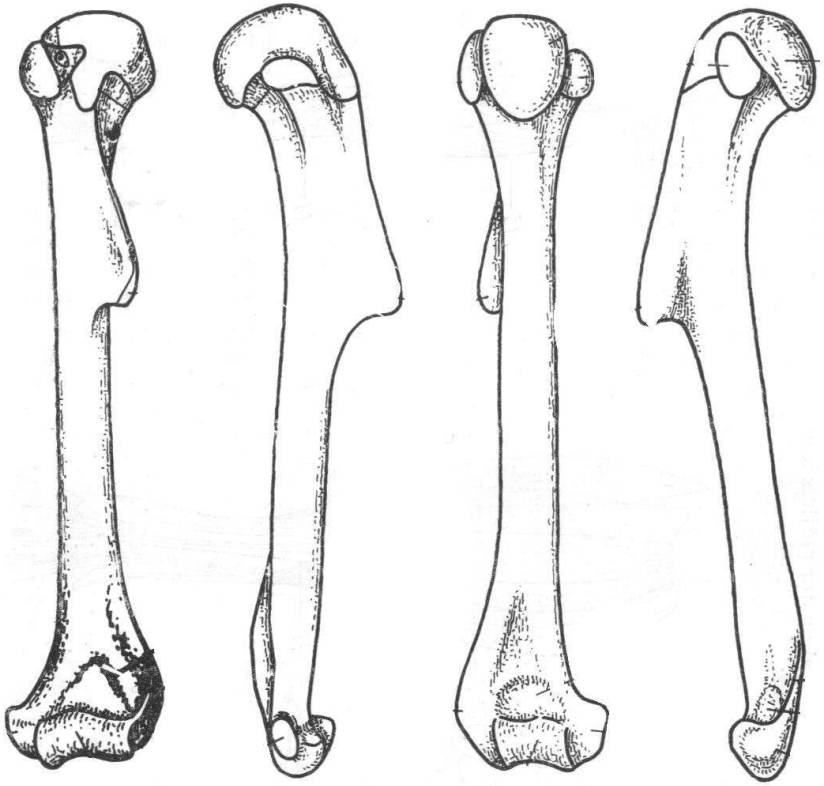
Efficiency change of arid pastures in connection with warming

- = lengthening of the period of spring vegetation at the expense of its beginning from the middle of February not since April as usual;
- = regular autumn vegetation;
- = increase in number of vegetative winters and expansion to the north of borders of their regular display.

Thank you for attention!

Using humerus bones for analysis





The geography of use by the population of natural resources in general, the hunting species of birds and mammal, in particular, is investigated very poorly. The analysis of this factor of death rate of animals on the one hand and economic value for the populations with another is important for planning nature protection actions and for the organization not trade uses of natural resources.

We develop and successfully apply methods of the analysis specific and sex-age structure of the hunting extraction on a structure of humerus. For an example, in our article we result the data on the analysis of specific structure duck, extracted by hunters in Uzbekistan.

We will be grateful for an opportunity of cooperation on questions of the analysis and definition of humerus from birds and mammals.

Now I want give some example of using humerus bones.

In present days hunters don't know what they shouted

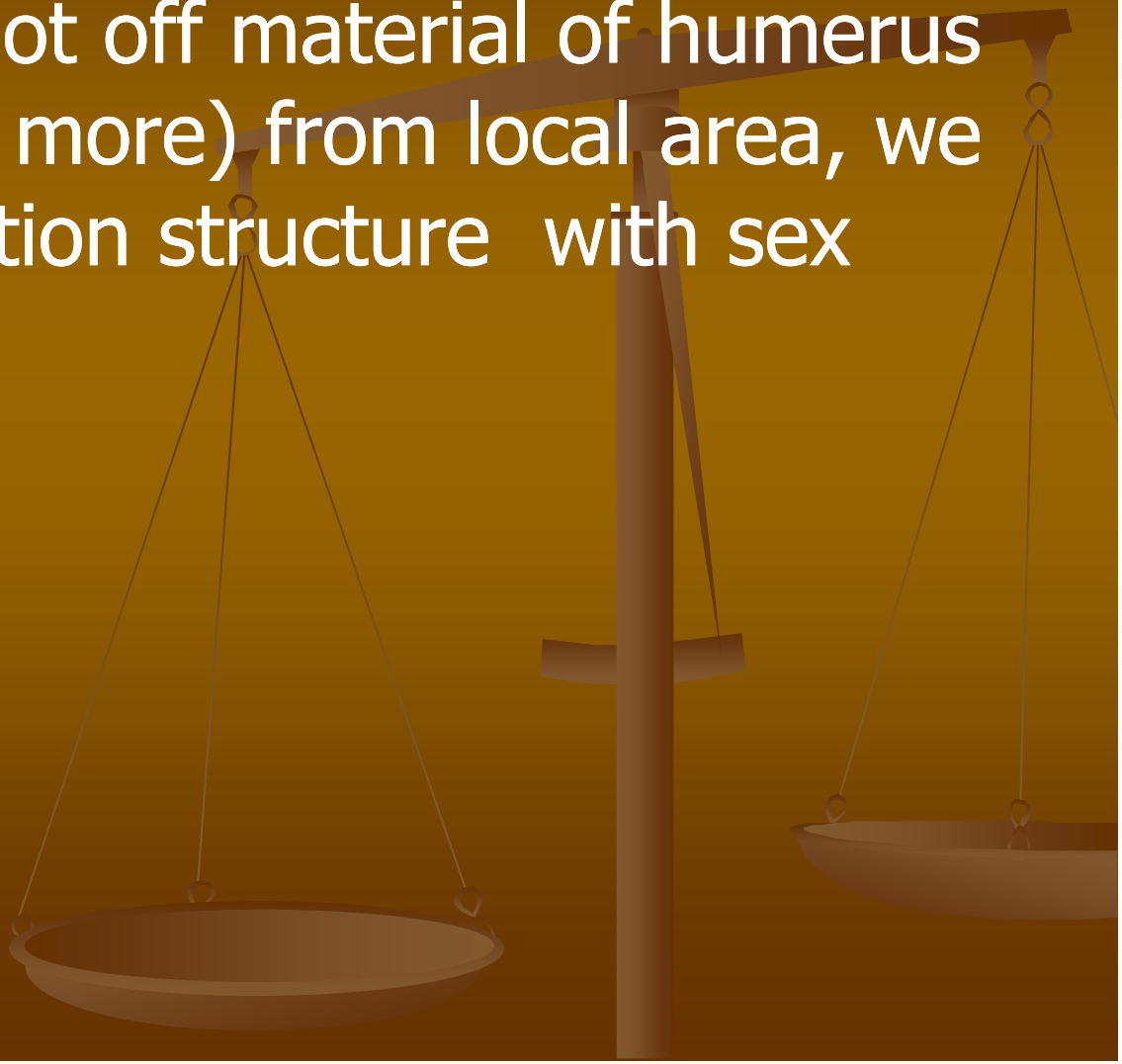
For example from 30 Gooses
6 *Anser erythropus* in 2001-2002

Every year shoot about 30-40 *Aythya nyroca*

When we receive bones from hunters, it gives us opportunity to know about species allocation

Humerus bones and population structure

When we have a lot off material of humerus bones (100 and more) from local area, we can give population structure with sex and age datas



Anas platyrhynchos and Anas crecca

Species	Sex	Month						
		IX	X	XI	XII	I	II	III
Anas platyrchynchos	♂♂		12.3	16.4	25.5	29.5	9.8	6.5
	♀♀		12.5	10.4	30.2	25.0	9.4	12.5
Anas crecca	♂♂	11.9	13.5	6.8	13.5	13.5	8.5	32.2
	♀♀	5.7	22.7	15.9	21.6	17.0	1.1	15.9

Sex characteristic

Anas platyrhynchos and Anas crecca

n=218	Age				
	< 1	1	2	3	4
♂♂ (56.0%)	26.3	45.9	19.7	7.3	0.8
♀♀ (44.0%)	18.7	32.3	41.7	7.3	-

n=147	Age			
	< 1	1	2	3
♂♂ (40.1%)	13.5	55.9	22.1	8.5
♀♀ (59.9%)	4.5	36.5	57.9	1.1

Age characteristic

Thank you for attention!