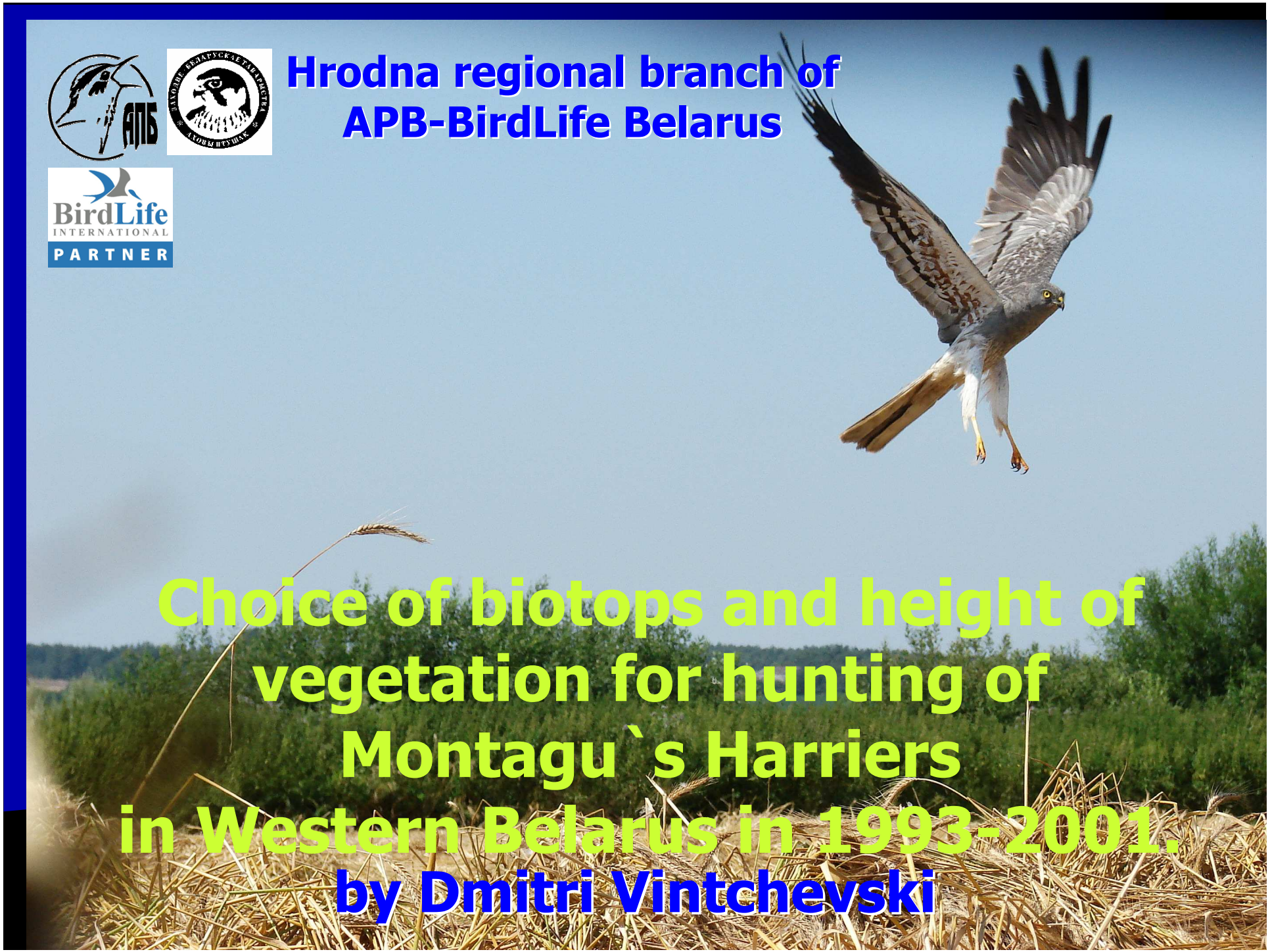


Hrodna regional branch of
APB-BirdLife Belarus

Choice of biotops and height of vegetation for hunting of Montagu`s Harriers in Western Belarus in 1993-2001.

by Dmitri Vintchevski

1. Introduction

The type of searching strategy and attack of the raptor, like the selection of hunting grounds, success rates of different types of attack and the most successful hunting biotops during the breeding season it is an important part of the knowledge of the ecology of the species (Kenward & Widen, 1989).

Vintchevski, D. E. (2006) Hunting of Montagu's Harrier *(Circus pygargus)* during breeding seasons (1993-2001) in West Belarus. PopulationsÖkologie Greifvogel- und Eulenarten 5: 245-260

2. Methods: Territory.

Observations were made on almost the same core territory around Hrodna city with total area ca. 100-200 km² in 1993-2001. Territory consits mainly in arable farmland, belonging to the several collective farms (kolkhoses).

Hunting.

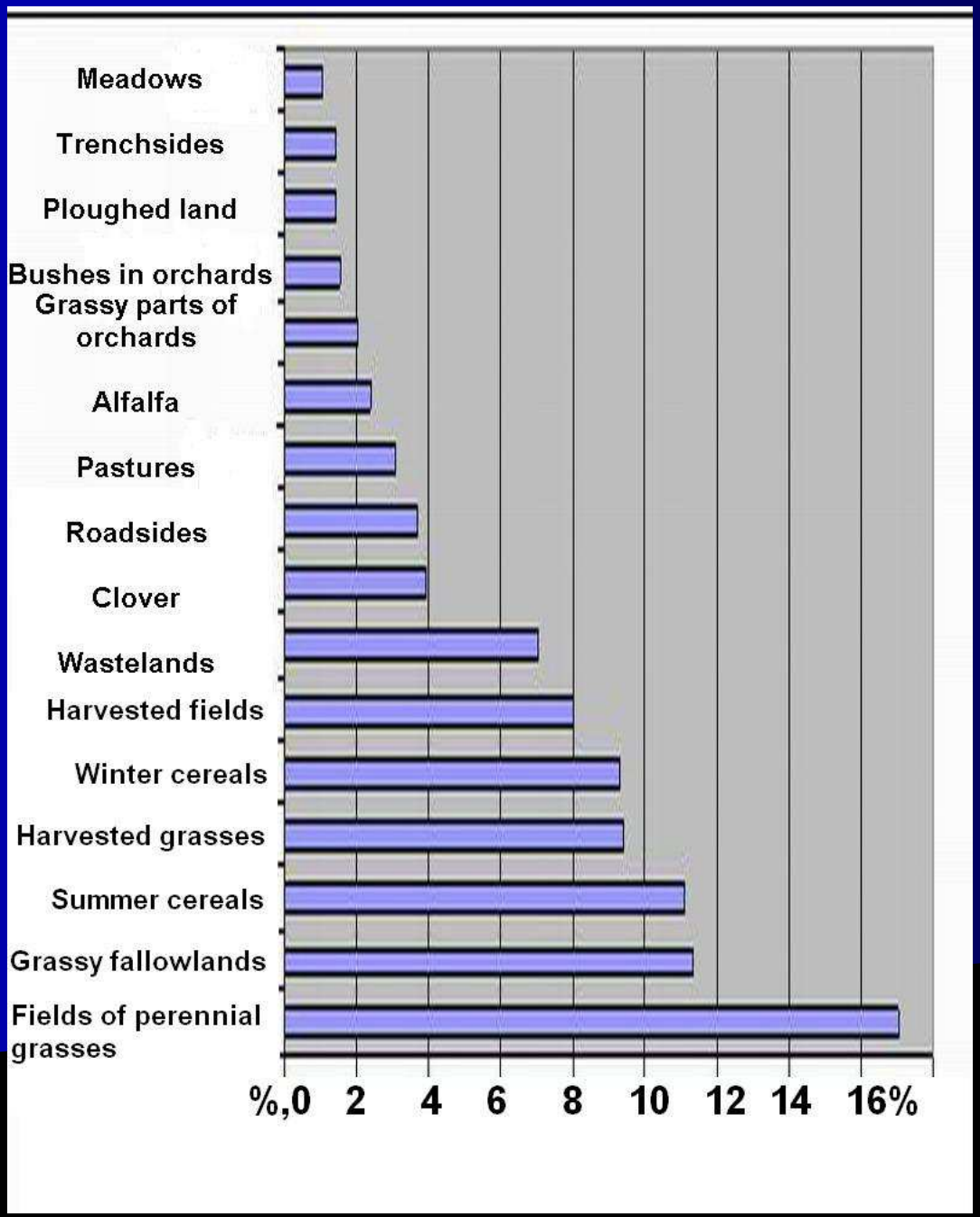
We define hunting as ‘when a predator searches for, or attacks prey’ (Fox, 1981). All observations were made directly using binoculars, because visual techniques are still suitable for the species, which forage in open country (Kenward & Wisen, 1989), as Montagu’s Harrier.

Observations were made during the breeding seasons (with less time in April and August).

3. Results

Selection of the hunting grounds.

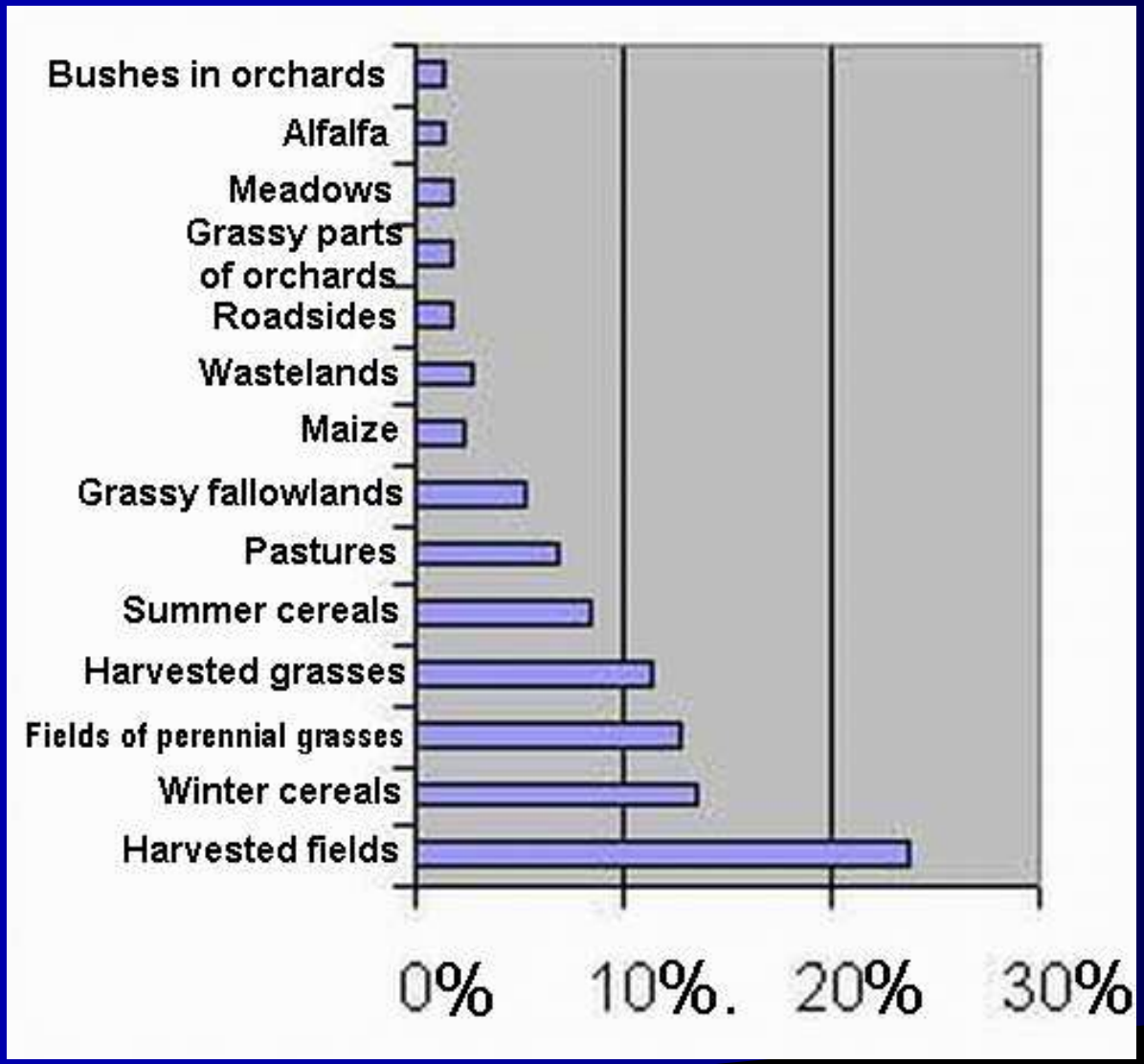
- Males, females and juveniles harriers used for hunting 36 different biotops and also edges of some of them.
- But the proportions of the selection of different biotops were different comparing both sexes and juv.



Selection of hunting grounds by males of Montagu's harriers,

n=838

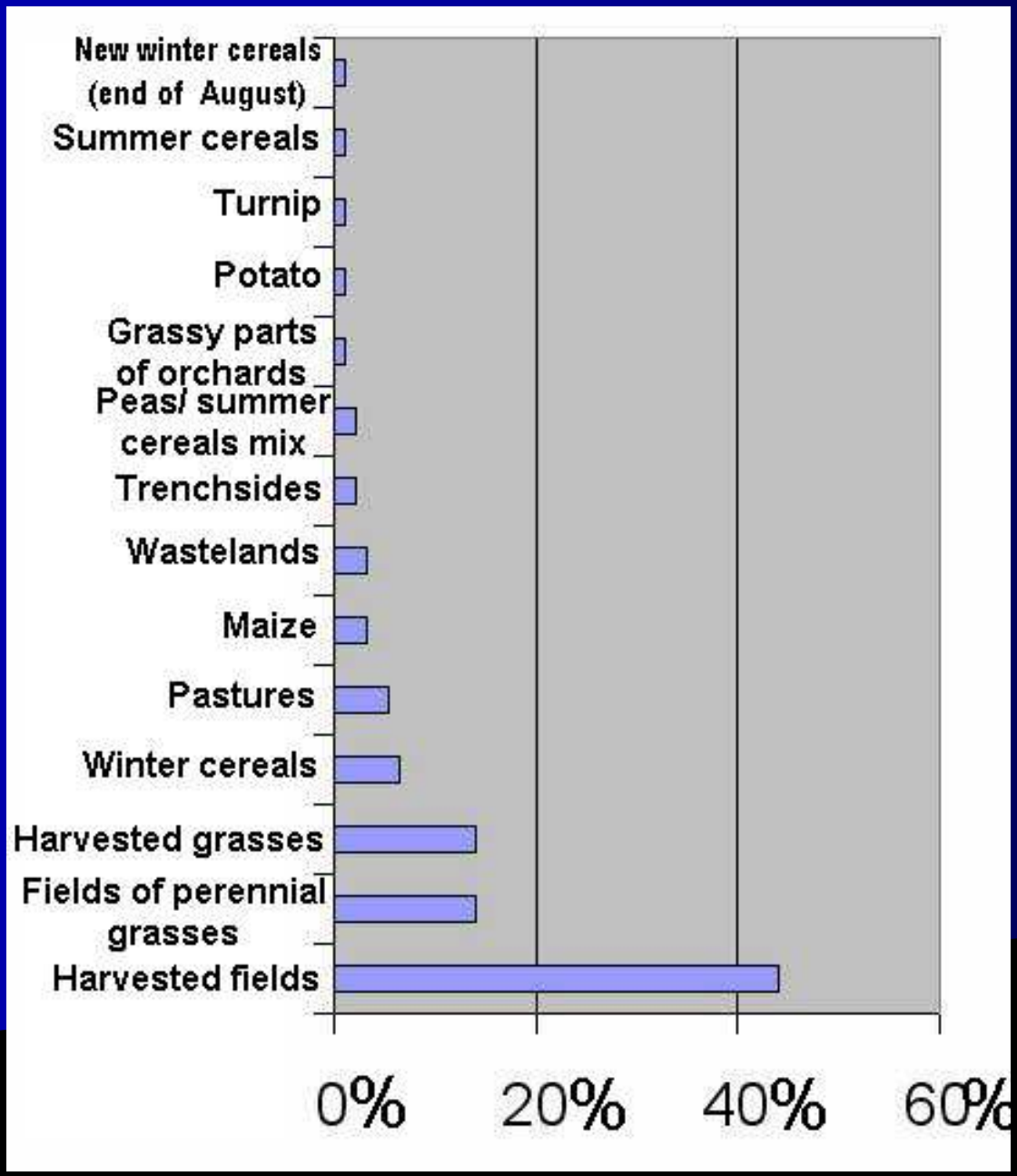
Shown only biotops, that were used more often, than in 1% of all observations.



Selection of hunting grounds by females of Montagu's harriers,

n=353

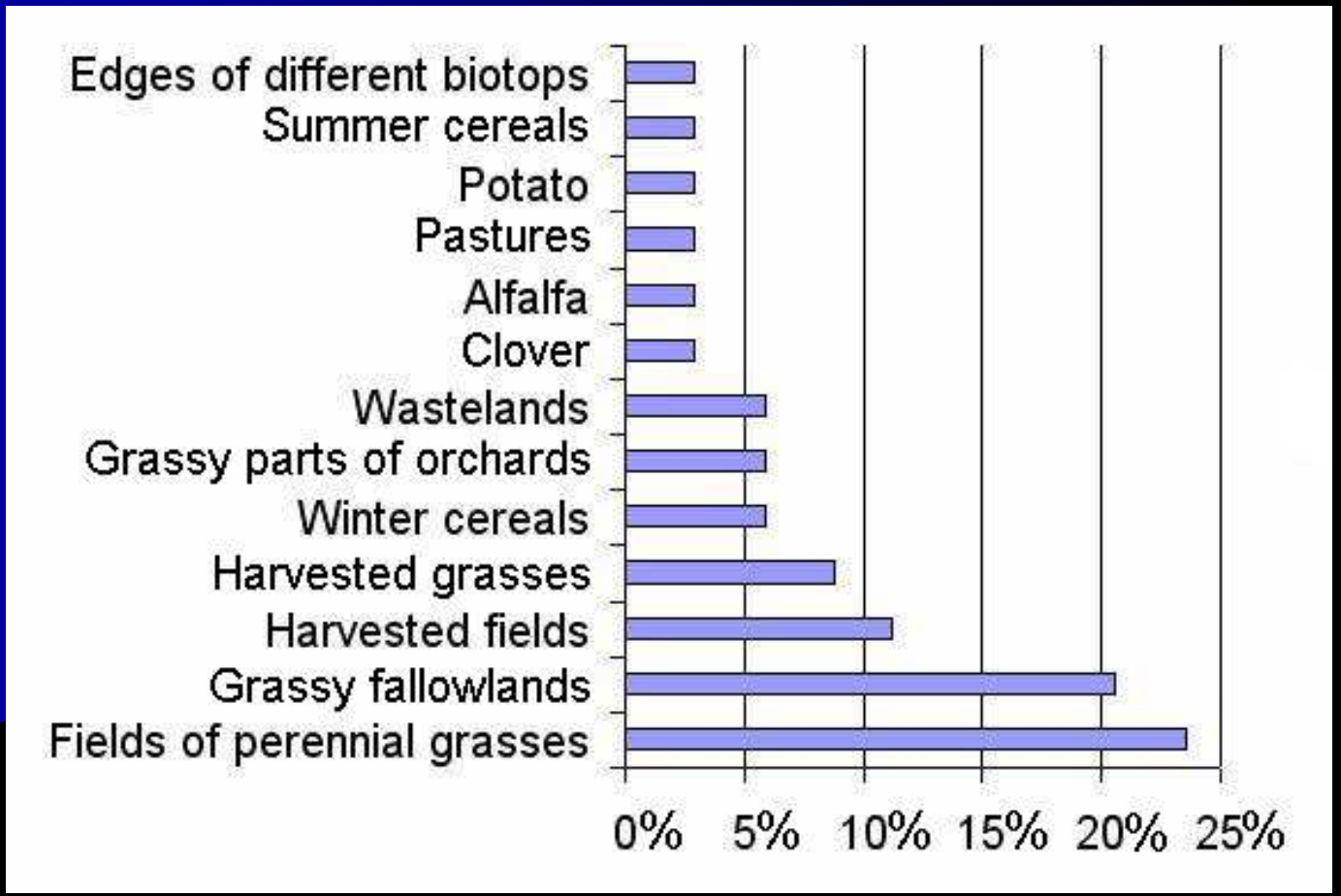
Shown only biotops, that were used more often, than in 1% of all observations.



Selection of hunting grounds by juveniles of Montagu's harriers,

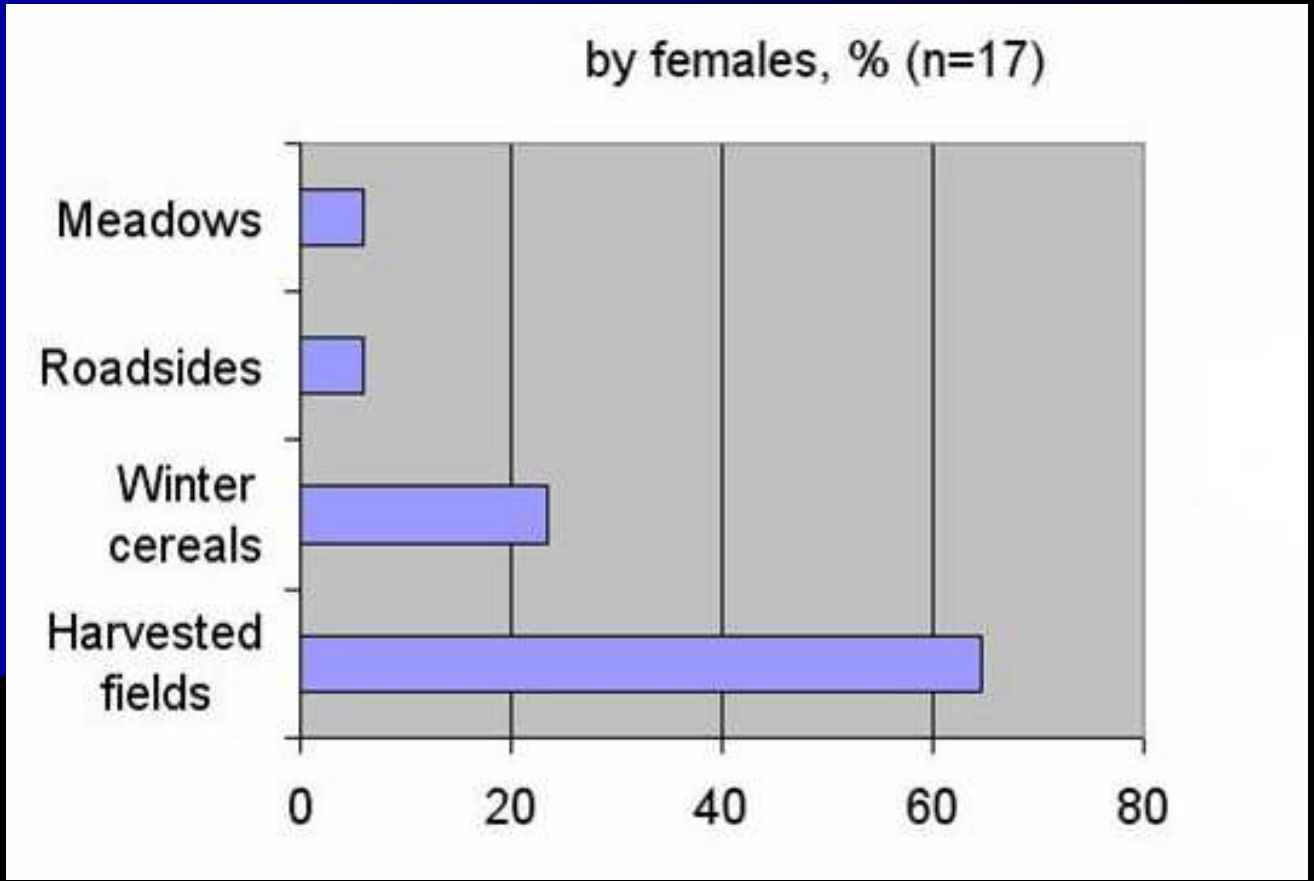
Successful biotops

where successful hunting of males were observed, n=34 .

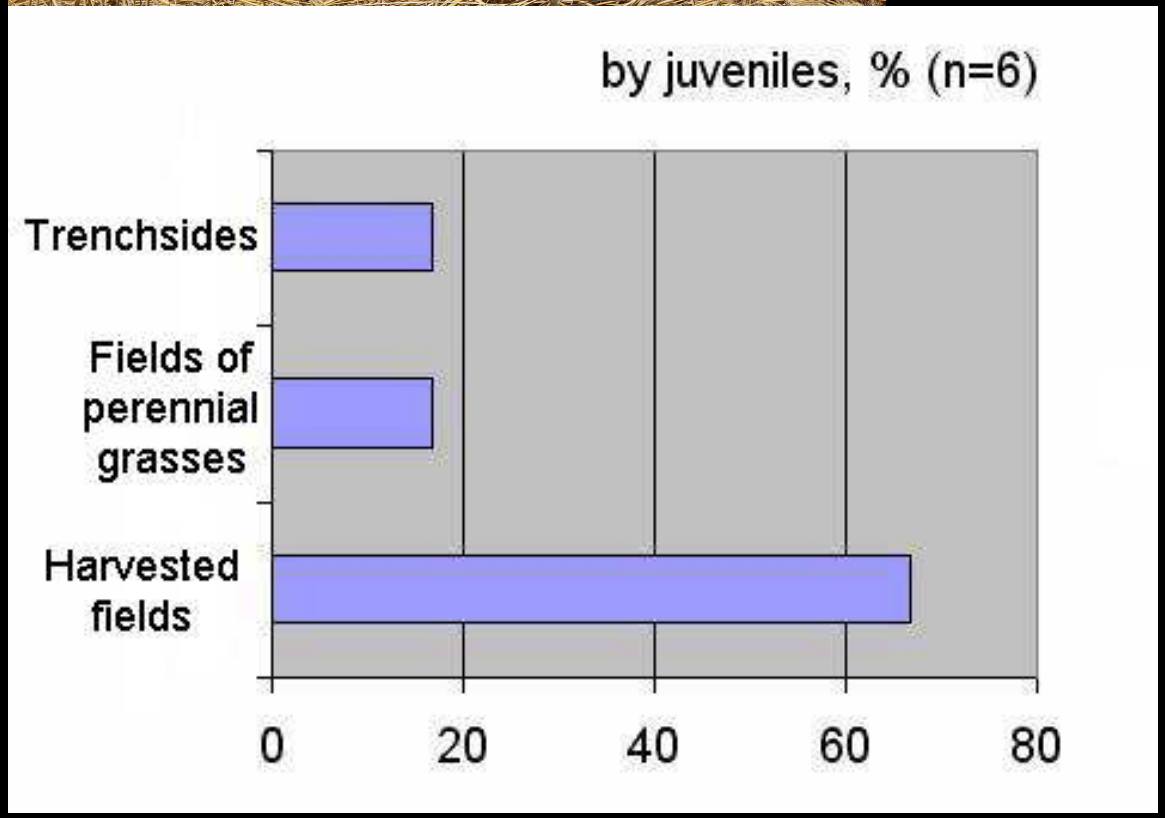


Successful biotops

where successful hunting of females were observed, n=17.

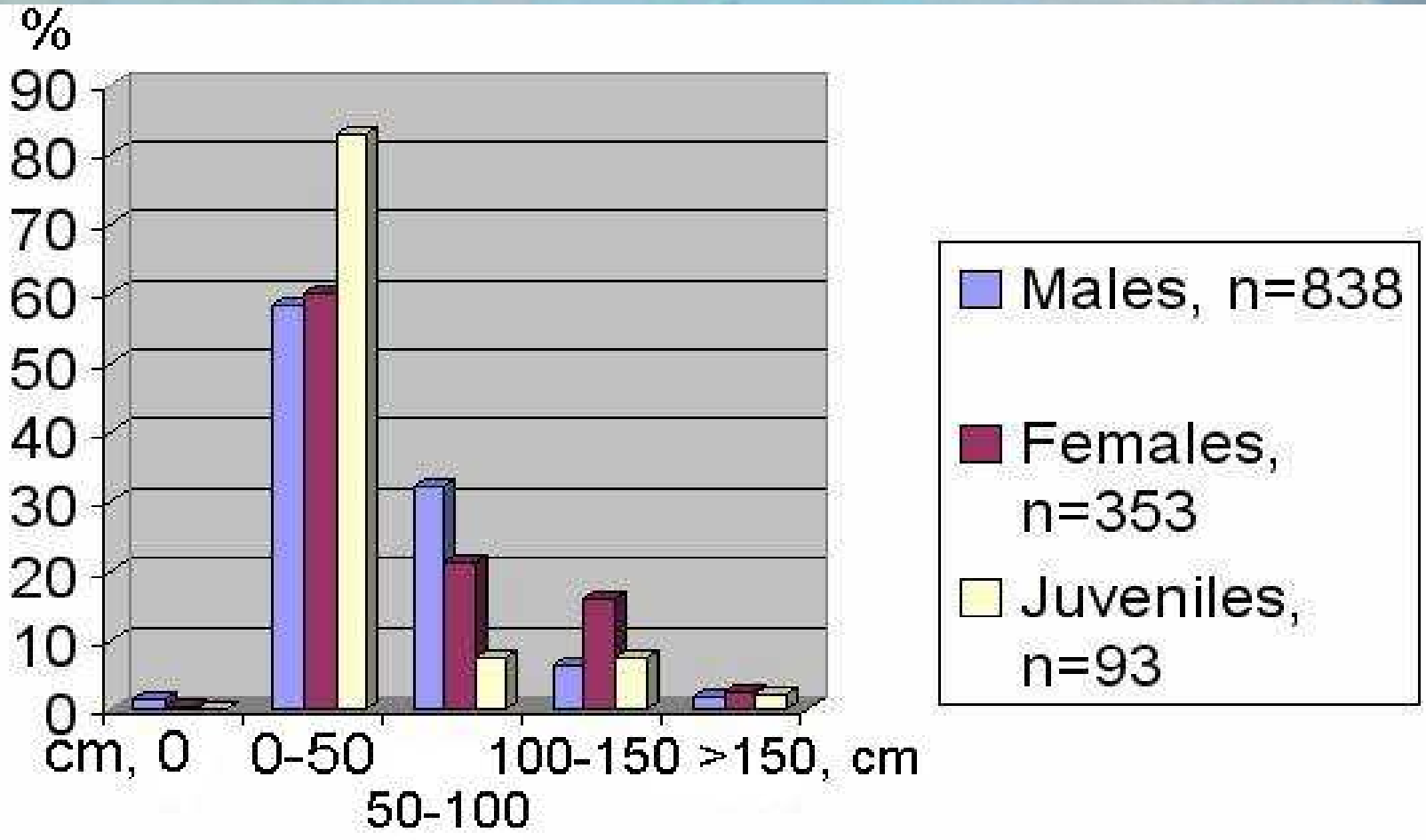


Successful biotops



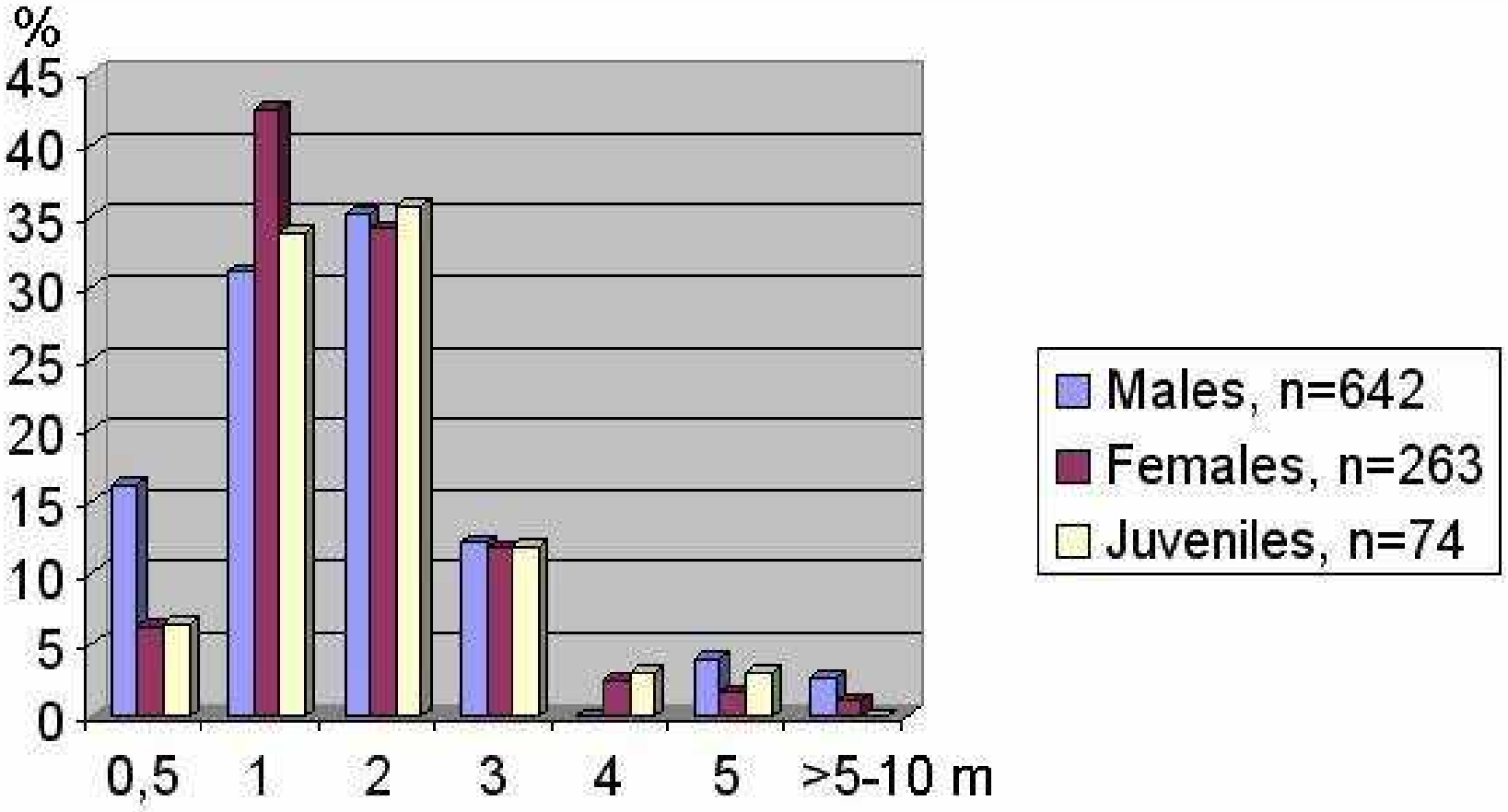
where successful hunting of juveniles were observed, n=6.

Height of vegetation

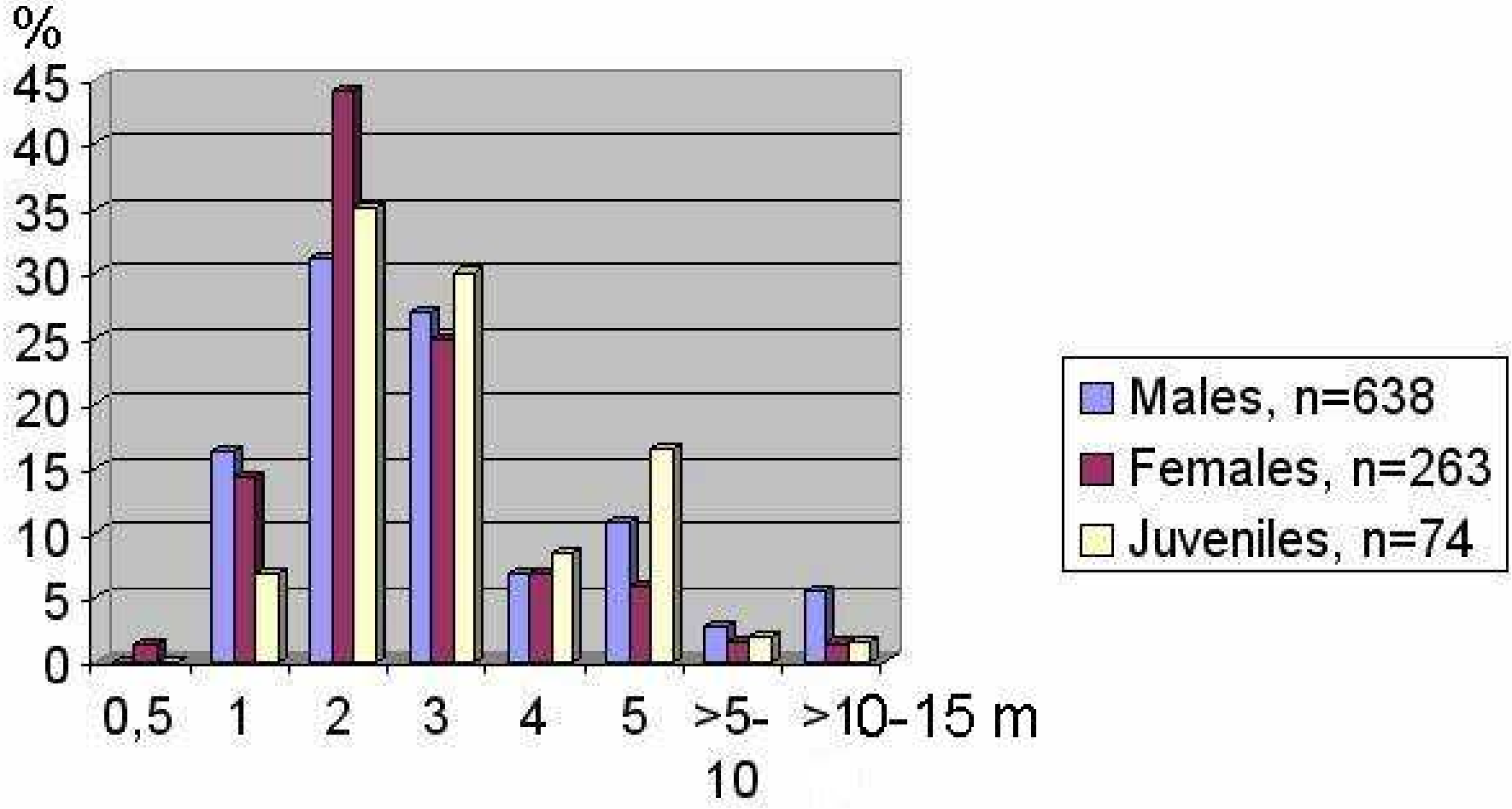


Using wind direction for hunting

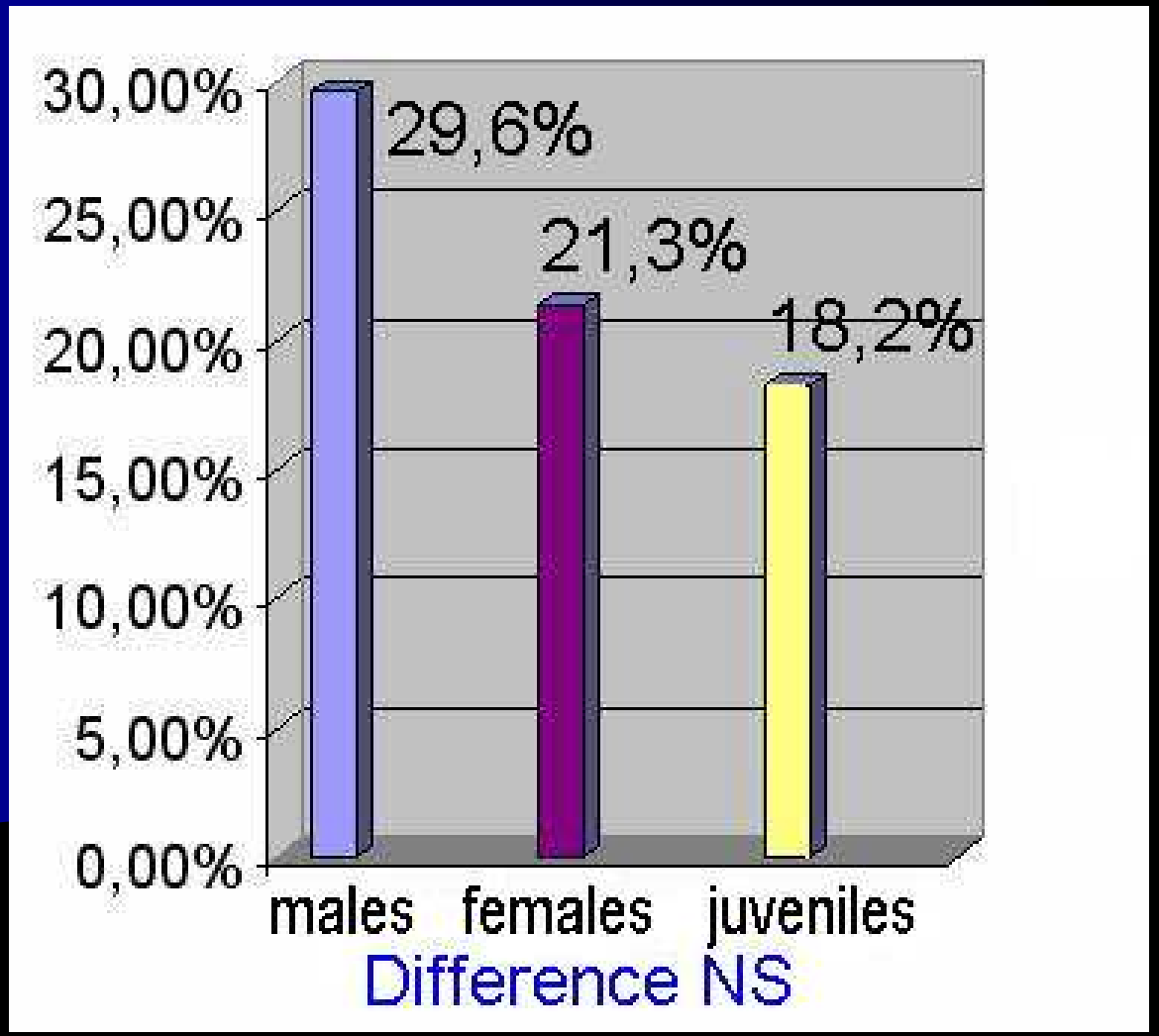
Minimal height of hunting flights



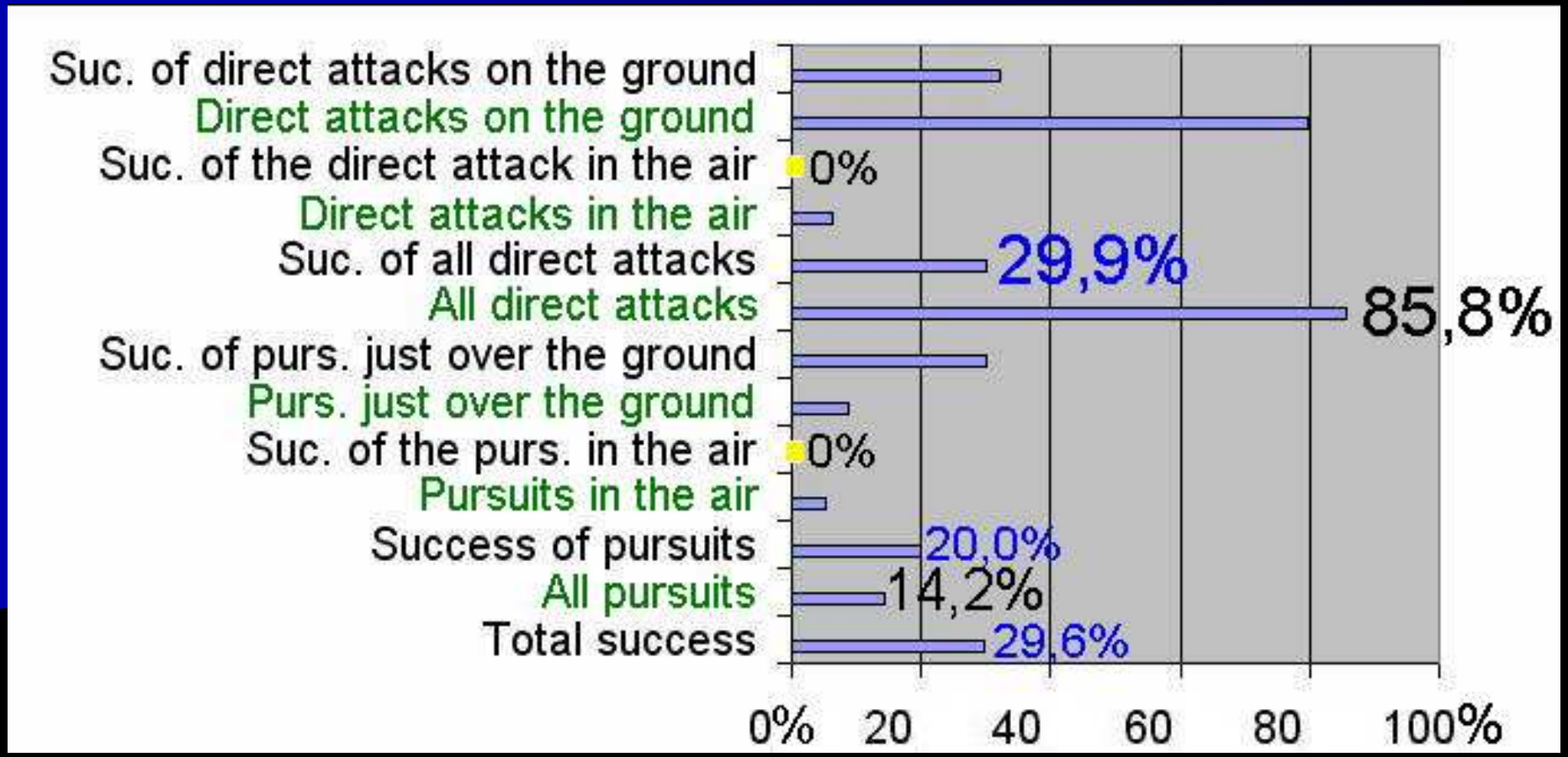
Maximal height of hunting flights



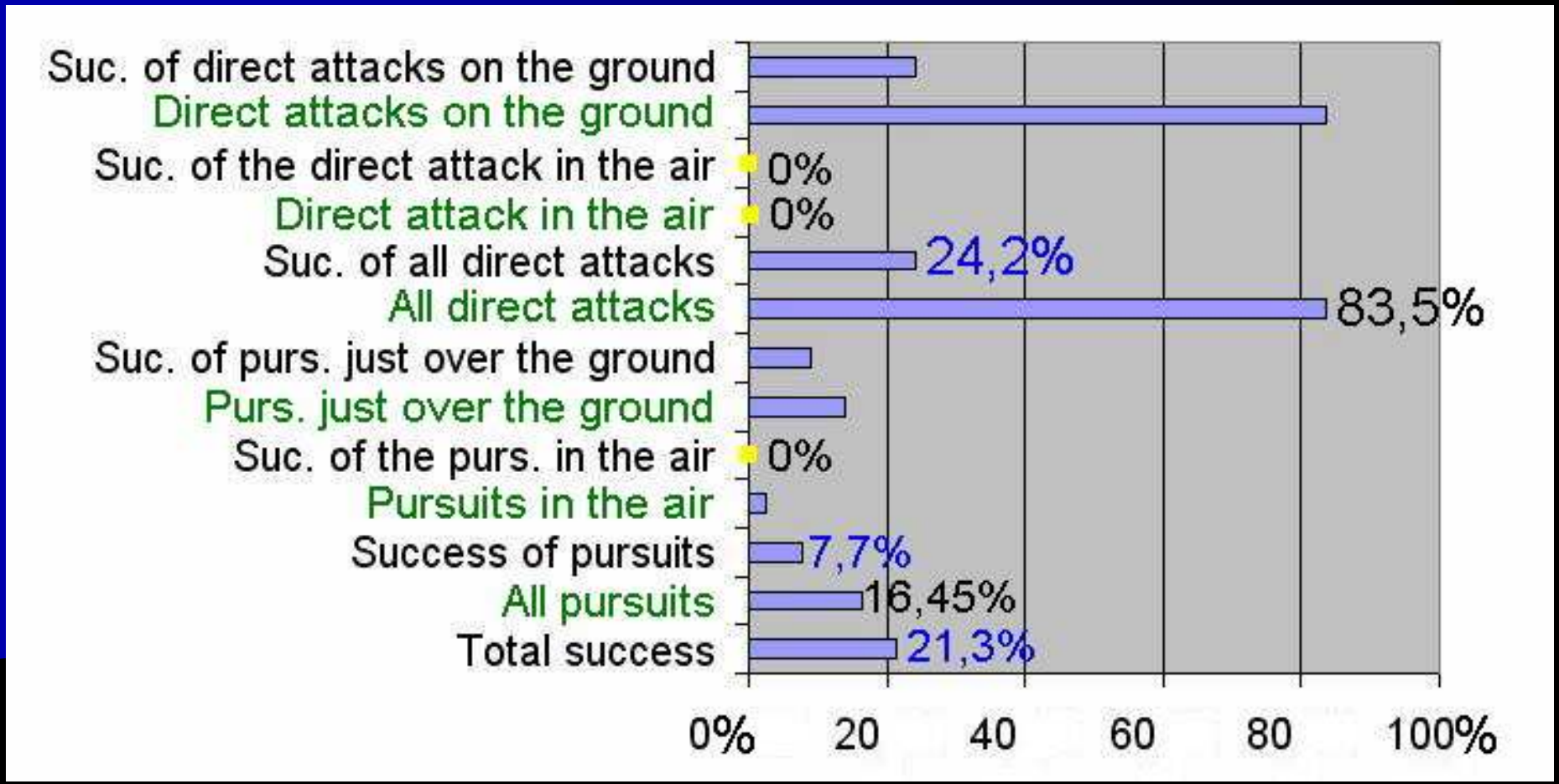
Success of hunting and types of attacks



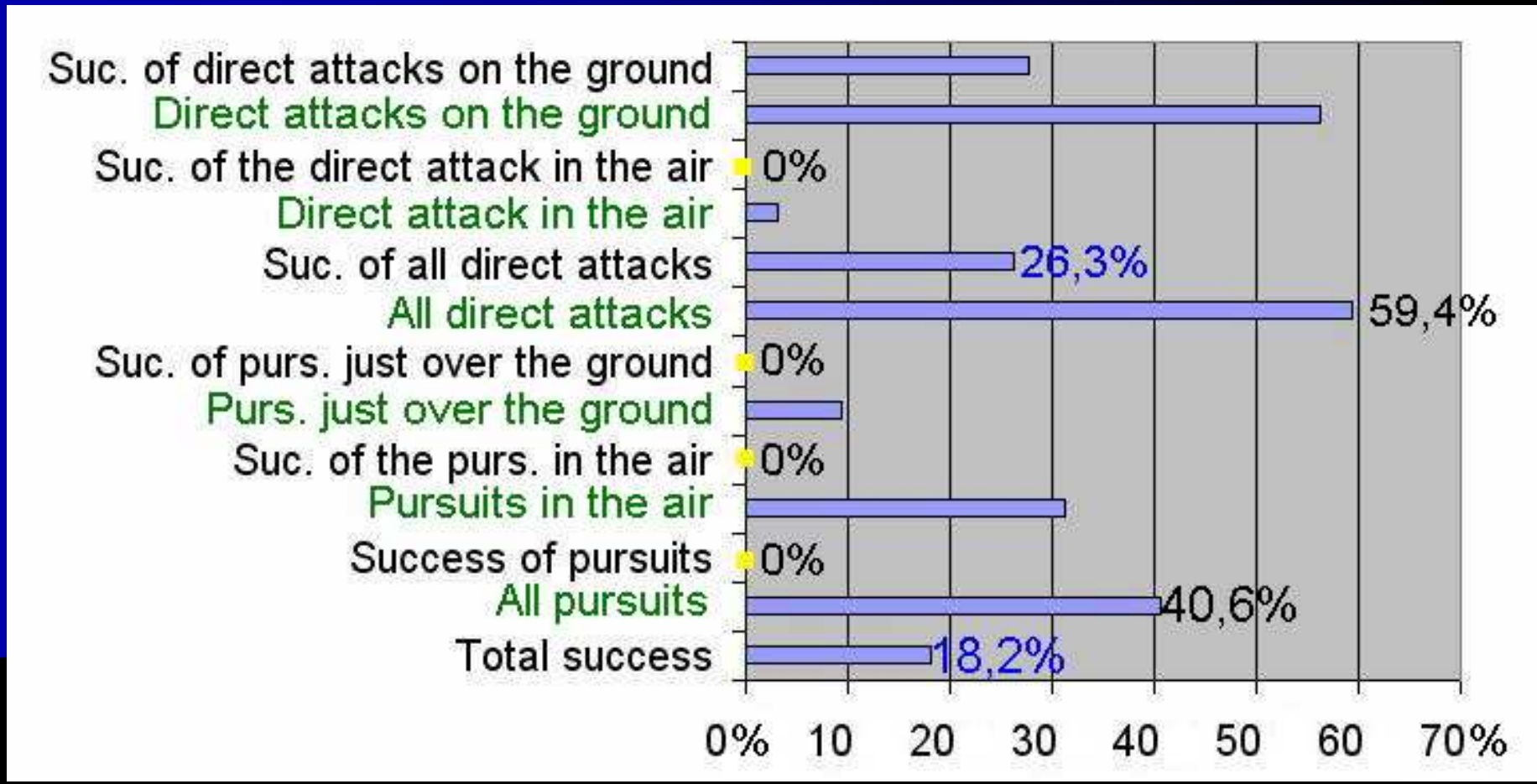
Proportions of different using and success rates of different types of attacks by males, n=115



Proportions of different using and success rates of different types of attacks by females, n=80



Proportions of different using and success rates of different types of attacks by juveniles, n=33



4. Discussion

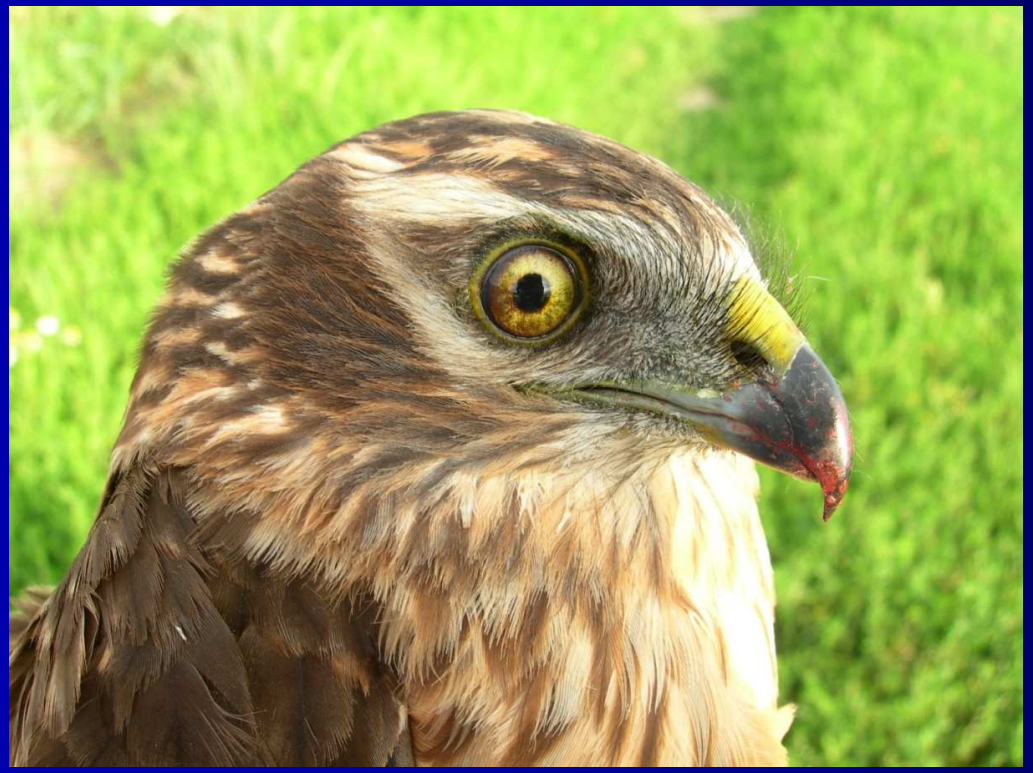
Our data also showed strong preference of the species to hunt over the comparatively low vegetation (not higher than ca. 1,5 m) as data from other sources (Glutz et al., 1971, Schipper, 1977, Zubarovs'kyi, 1977, Juliard, 1979, Stankiavichus, 1986, Nikolaev, 1998)

Most often they hunted over unharvested and harvested fields of perennial grasses and cereals, grassy fallowlands, pastures and meadows (Petrement, 1967, Schipper, 1977, Shepel, 1992, Clemens, 1993, et others). Less often harriers were observed hunting as in our study over high vegetation – reedbeds (Geyr von Schweppenburg, 1957 in Glutz et al, 1971, Schipper, 1977), in forests (Zubarovs'kyi, 1977) or over the natural biotops: bogs or meadows (Shepel, 1992, Bankovics, 1993, Nikolaev, 1998).

The success rates of studied hurriers was rather low if to compare with the other populations of Montagu's Harrier during the breeding season (ca. 40% in Spain (Arroyo et al., 1995)). But if compare with other raptor species, those hunts mostly on small rodents, the rate of successful huntings will be the same or even higher (ca.18% for the Hen Harrier *(Circus cyaneus)* (Shepel et al., 1991), 12-27% for the Black Kite *(Milvus migrans)* or 13-27% for the Common Buzzard (Krever & Krever, 1985).

We observed comparatively many cases of hunting juv. with rather high successful rate (18,2%). Some other authors did not observe successful attacks of young Montagu's Harriers at all (in Spain, Arroyo, 1995). Other authors observed only attacks on small passerines (Pomarol, 1994) or insects (Kitowski, 1990). We registered several unsuccessful attacks on Wood Pigeons, Hooded Crows, and even Rooks and successful on voles.

Our data on types of huntings of adults and juv. suggested that with development of hunting skills, Montagu's Harriers use less often direct attacks in the air and air pursuits. Also they increase the rate of the attacks just over the ground and higher maximal height of flights. With time young birds selected for hunting more types of biotops with more different vegetation structure as well as they increased the diversity of biotops, where they hunt successfully. Last 2 changes in development of hunting skills also were noted for the Goshawk by Fox (1981).



Generally we have the impression that with seasons, males of harriers changed considerably their hunting grounds, that is also known for Hen Harrier (Shepel, 1992) as well for other raptors (Newton, 1979).


Thank you for your attention!