

First remarks over the hierarchy of waterbirds and their use of roosts in the breeding colony of herons (garzaia) of Ripasottile.

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INTRODUCTION

This study was done in the Wildlife Reserve of Lungo and Ripasottile lakes with the purpose of verifying the existence of an interspecific and intraspecific hierarchy between the waterbirds in the Reserve for using the two roosts situated in the heart of the garzaia of Ripasottile lake.

Objective of the study

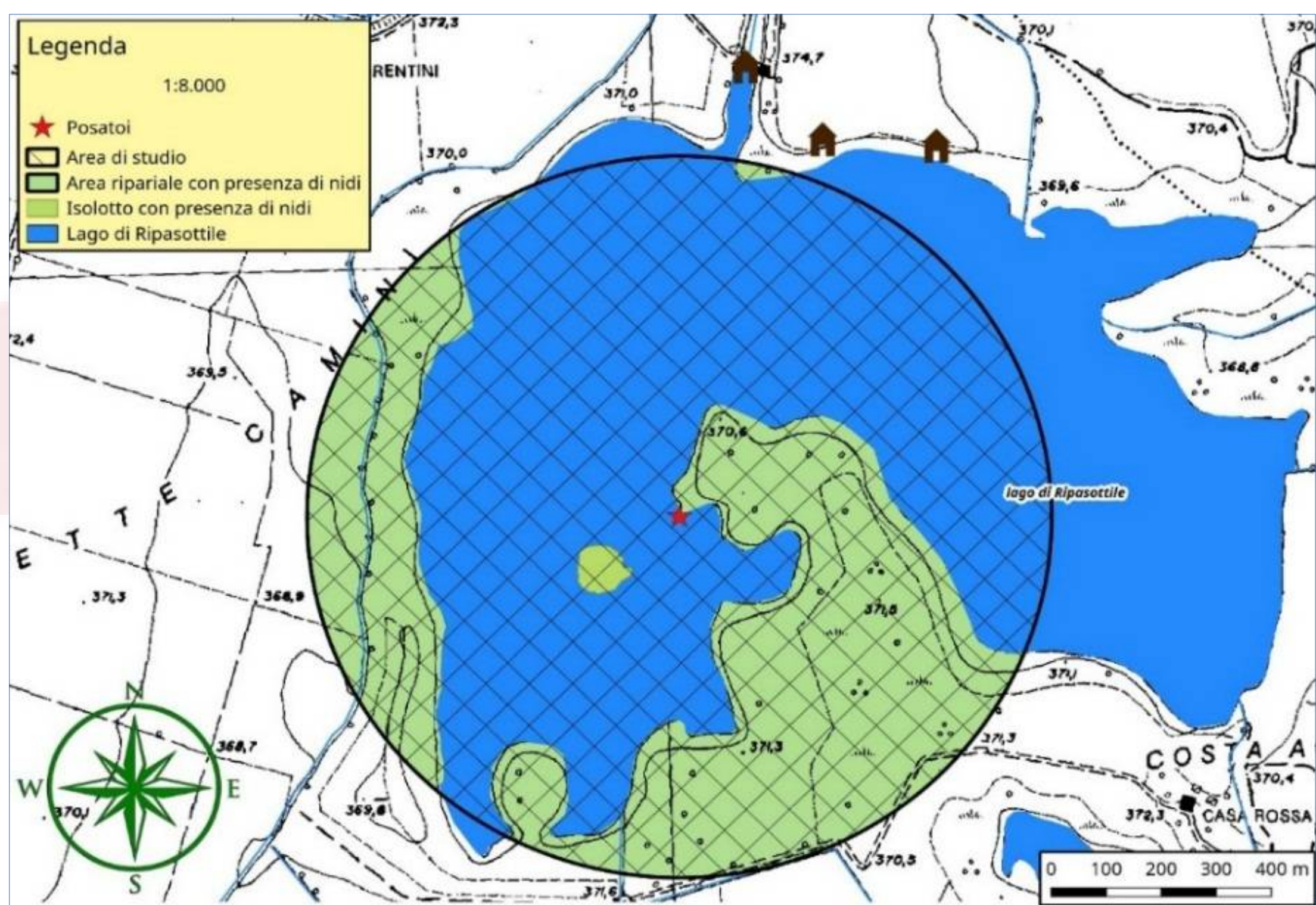
The purpose of the study is to verify:

- The existence of an interspecific hierarchy for using the roosts;
- The possible hierarchical order for using the roosts;
- The existence of an intraspecific hierarchy for using roosts;
- The existence or not of interspecific cohabitation for using the roosts.

The area of the study was chosen for the position of the roosts, in the heart of the garzaia, which, thanks to its expansion and the high number of hosts, and the simplified research of trophic resource, dispatched for the newborns, makes these two roosts very coveted. For additional information regarding the area of the study, refer to the publications: Fermani R.N., 2019; Di Carlo & Castiglia, 1981.



Roost used by birds near the colony



Area of study

RESULTS

In a period of 252 days of survey, that is 6048 hours, have been studied ten ornithic species: Mallard (*Anas platyrhynchos* L.), Pochard (*Aythya ferina* L.), Grey Heron (*Ardea cinerea* L.); Cattle Egret (*Bubulcus ibis* L.); Little Egret (*Egretta garzetta* L.); Night Heron (*Nycticorax nycticorax* L.), Glossy Ibis (*Plegadis falcinellus* L.), Coot (*Fulica atra* L.), Hooded Crow (*Corvus corone cornix* L.), Cormorant (*Phalacrocorax carbo* L.).

Such species were protagonists of 71 events:

12 cohabitation events (9 between different species); 60 rivalry events due to the use of roosts:

35 intraspecifics; 25 interspecifics.

DISCUSSION

The study satisfied the initial objectives since the existence of an intraspecific and interspecific hierarchy for using roosts was confirmed, as the same as an existence of an interspecific cohabitation. Moreover, was possible to establish a hierarchic order, which is reported in the underlying.

CONCLUSIONS

In the pyramidal graphic reported in the Figure n. 2 were excluded 3 of 10 studied species (Pochard, Hooded Crow and Glossy Ibis) because of a lack of deeper information. The classification of the Coot and of the Night Heron is temporary, since they only "confronted" to other species positioned under them. Given that it is an experimental study, these results can't be considered absolute, but connected to the research area. Then this survey is a base to further detailed studies that can verify, in this way, if the found hierarchic order results unchanged in other places.

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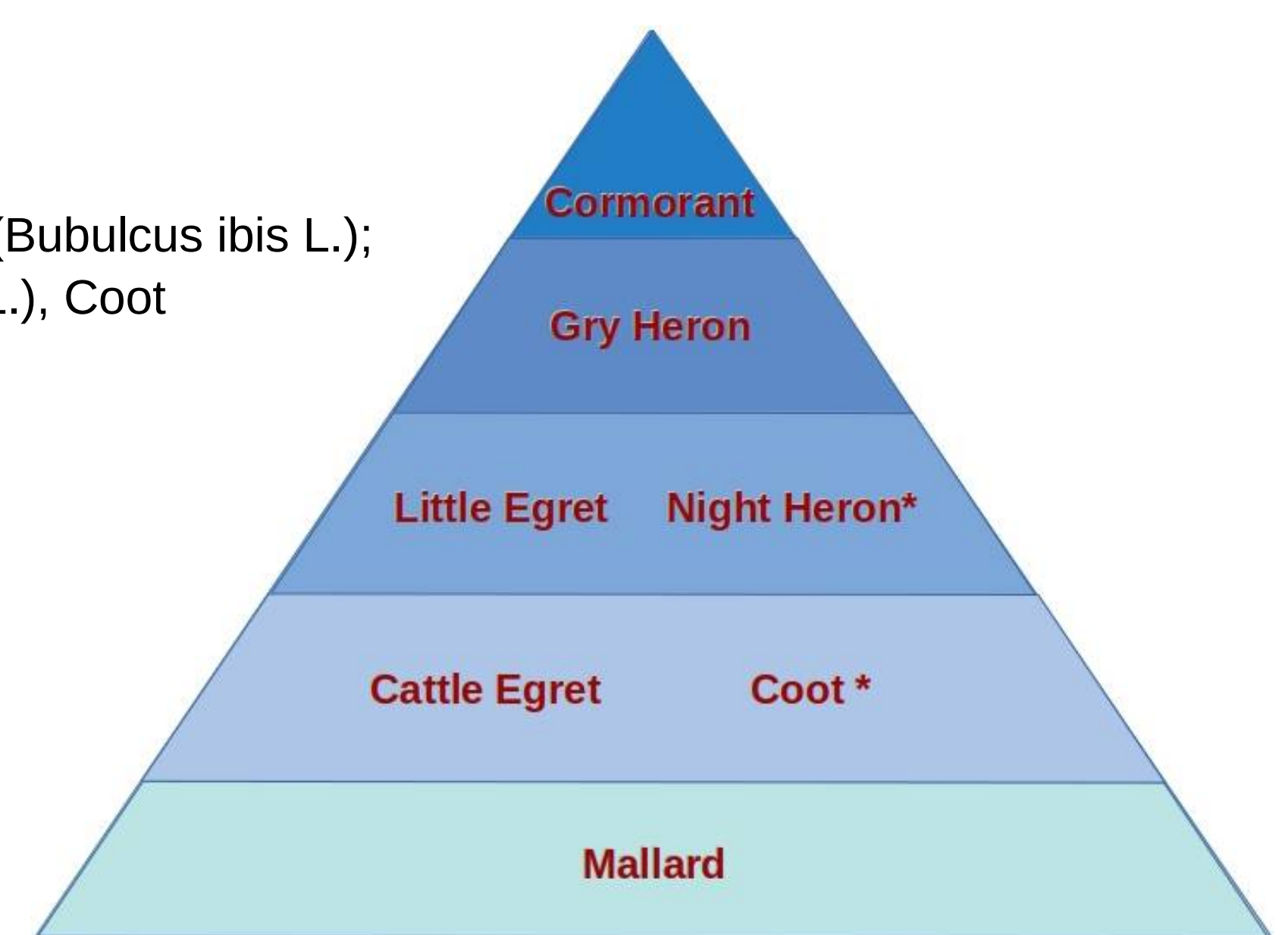
MATERIALS AND METOD

The study was realized thanks to the photo trapping technique, that allowed to monitor the two roosts for five consecutive months, specifically from July to december 2016, the period in which it is possible to supervise the situation with both resident and migratory species. The batteries and the memory cards that permitted the photo traps to work, have been replaced weekly, in order to keep a constant supervision on the roosts. The use of a motor boat and its PPE (Personal Protective Equipment) was necessary to reach the above-mentioned roosts.

In a second moment, the multimedia files recorded have been displayed on a computer, then filtered and divided in:

1. Interspecific Interactions:
 - Rivalry;
 - Cohabitation.
2. Intraspecific Interactions:
 - Rivalry;
 - Cohabitation.

This operation revealed to be indispensable to data analysis.



Pyramid scheme of the hierarchical order