BIOLOGICAL, ECOLOGICAL AND ETHOLOGICAL ASPECTS OF THE SPECIES *CAPRIMULGUS EUROPAEUS* L., 1758 FROM TINCA AREA (BIHOR COUNTY, ROMANIA)

Ilie Aurelian Leonardo*, Marinescu Mariana**

* „Nicolae Jiga" Theoretical High school Tinca, Bihor County, Republicii St., No.36/A, Romania, e-mail: aurelian_ilie@yahoo.fr
** University of Oradea, Didactic Staff Training Department (DSTS), Universitatii St., No.1, Romania, e-mail: marinescum54@yahoo.com

Abstract

The authors presents biological, ecological and ethological notes of the species Caprimulgus europaeus L., finded because of the researches undertaked during 2003-2012 in the Rapa and Tinca forests, belonging to the Tinca area.

Key words: biology, ethology, nightjar, Tinca area.

INTRODUCTION

Tinca area (Fig. 1) is located in the south-western part of Bihor country, belonging to the historical province Crişana, with a surface of 454 km2, at the confluence of the Miersig Plain and the Holod Depression. The middle altitude is 115 m, the climate is temperate-continental, moderate, having one particular nuance, the pannonic.

From the drainage point of view the analyzed territory belongs to the inferior limit of the Crişul Negru river middle course (Berindei, Pop, 1972).

The Tinca area join from the vegetative point of view in the oak stage, the vegetation of the area having a predominant central-european origin.

The forests are formed from the species belonging to the *Querqus* genus (Linnaeus 1753): Turkey oak, evergreen oak, Hungarian oak, red oak at which we add isolated copies or troops of beech tree, false acacia, hornbeam, maple tree, elm, ash tree.

The different leguminous plants, graminaceae, some compositae are meeted in the lawns of the Tinca area.

Notes about this species at national level rediscovers in the works of Dombrowski (1921) and Ciochia (1992). Maps looking the spreading of this species rediscovers in some Romanian Ornithological Society publishers (1994, 2002). Notes looking the presence of this species in Tinca area rediscovers in some scientifical works elaborated by Ilie (2008, 2011, 2012).

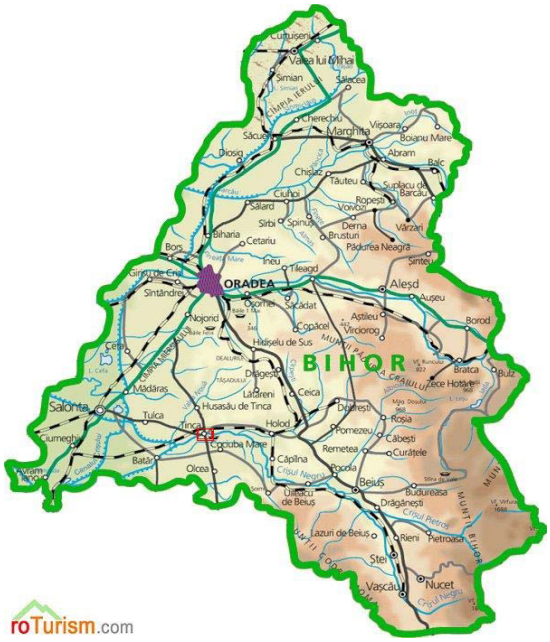

Fig. 1. Tinca area (Source: Google Earth software)

MATERIAL AND METHODS

The biology, ecology and ethology of this species in Tinca area was observed during 2003-2012, in the period 15 th March – 1 st October.

We used the method of routes and the method of fixed points. The optic equipement binoculars Norconia size 8 x 25, 20 x 50, completed with direct observations.

The observation were realized preeminently in crepuscle and night, but even by day.

RESULTS AND DISCUSSIONS

In Romania nests *Caprimulgus europaeus* ssp. *meridionalis* (Hartert 1896).

Following the reserches undertaked about this species in area were finded the followings: the favourite biotope of the species is the young forest, with clearings and rare venerable trees. The activity of species is preponderant crepuscular but also nocturnal (when the sky is clear and the light of the moon is maximum). Sometimes could be observed even by day, afternoon, by generally prefers the shade.

The plumage presents an diverse colouring: grey, brown – dark and yellow- brown and white spots on neck, wings and tail (Fig. 2).

Fig. 2. *Caprimulgus europaeus*
(Source: http://farm8.staticflickr.com/7125/7882092266_8c53f36feb_z.jpg)

This coloring have a role in procrypsis, being protecting.

By day, the bird is difficult to observe, beind stretched out on the ground or along of one big branch, making the illusion that it is a silver or a dry bark of a tree.

In this case the eyes are closed almost entirely, being visible only one very narrow portion, like one crack.

Although is a good flying species, his walking is heavily, similarly with the dragging on belly.

Is an insectivore species; the insects are captured generally in fly, but sometimes also on ground.

The beak is little but the stoma is very broad. We observed that the species not hunts when the dark is entire.

The food is formed by the coleopterans (cock chafers, beetles of manure), butterflies, locusts, etc.

The food is gived to the chicks through regurgitation. The hunting takes place at the skirt of a forest, on the pastures, but sometimes penetrates evening the inside on the villages.

Ex: - one male individual, Tinca, 10 th September 2010, at 21,00 hour.

- one female individual, Tinca, 18 th July 2012, at 21,10 hour.

When the species hunt it could bring very much near the domestic animals existented on the pastures, catchind the insects existented in the neighbourhood of them.

Ex: one male individual flying, observed on the pasture from the location „Huta", where feeded the sheeps, 3rd July 2010, Tinca.

From the phenological point of view, the nightjar is summer visitor at national level.

In Tinca area this species arrives generally in a second ten day of april, but in the years with high temperatures were recorded even more early arrivals.

Ex: 28 th March 2011, 8 thApril 2012.

"The nuptial games" were observed at the beginning of May. The male courts the female comes down flying, bends in the right and in the left with rhythmical flutters, emiting one prolonged and monotonous trill "crrrurrcrr ", similarly with the "purring" of a cat, who becomes then weak, low and rasping (still fluttering), then becomes calm suddenly. We calculated the length of time of this song with the clock and we finded that is maximum 1-30, then was followed a pause of some seconds and again " the purring" of 36.

"The purring" begins at 19.30-20.00 but were rare in the morning, before the sunrise. The nightjar nests on the ground, on the dry foliage or other vegetable remains from the forest ground. The laying is formed by two eggs. The eggs are not attached on next to other, being removed between they at one little distance.

The eggs presents white colour with grey and light – brown spots, having sizes 31x22 mm (Fig. 3). The adult and the chicks presents a procrypsis, but the eggs not presents this specific feature, beind placed entirely at the sight.

However, the choosing of the laying down of the eggs it makes so that it contains dry vegetable remains who offers a chromatic protection to the adults and chicks. The laying down of the eggs it makes by night.

Fig. 3. Eggs of *Caprimulgus europaeus*
(Source: http://www.biopix.com/photos/inn-caprimulgus-europaeus-00038.jpg)

The eggs are layed down during 25 th May – the first days of June. We identified nests with eggs in the following data: 2004 – 25 th May, 2006 – 1 st June, 2007 – 3 rd June, 2008 – 26th May, 2010 – 30th May, 2011 – 26 th May.

We identified too the second laying: 30 th June 2011, 1 nest with two eggs, in the Râpa forest.

This second laying was not identified in others years of the analized period.

The hatching of the eggs it makes from the other parents. Generally, the responsibility of the hatching is incumbent on female, being replaced by the male in the morning and in the evening, when she hunts insects.

When the adults hatches, it stands still, with the eyes shut. The bird not leaves the eggs than when even the enemy is very hard by her. At the appearance of one enemy having big sizes, the nighjar turns into injured, it tosses, bringing the enemy at a great distance from the nest.

If the enemy is more little the nighjar open the big beak, swells, claps one‘s wings trying to chase him.

The hatching lasts 17-18 days and the chicks remains in the nest 16-17 days.

The hatching begins after the laying down of the first egg. From the point of view of the reaction’s chicks at the hatching we finded that presents that presents intermediary features between the nidicolous and the nidifugous chicks. The nidicolous chicks hatchings blinds, uncovereds and inmobiles, but the nidifugous chicks are not capables to feed oneself only very late.

The chicks of the nightjar hatchings with the open eyes, presenting on the ventral part of the body, on the head and on the sides of the body a long and dense pubes, with colouring yellow – reddish, with brown spots. At 3-4 days after the hatching, the chicks begins to explore the neighbourhoods together with the nightfall.

The parents have a very protecting behavior about the chicks. During the day one of the parents stay with the chicks, defending they from the possible enemies or against unfavourable meteo conditions.

After the termination of the hatching, we observed a partial shedding of the adults, changing a part of the plumage.

After the chicks teach to fly very good the entirely family could to stay a certain time together, then it parts company.

Generally, the nightjar is a solitary bird, but in the period of migrations we can observe little bevies.

The number of individuals who forms those bevies is variable: 3 individuals, 2nd of September 2006; 4 individuals, 6 th September 2008, 1 individual 28 th September 2011.

The autumnal migration proceeds generally in September, very rarely at the end of August. Ex.: 30th August 2007, 1 individual, Tinca.

We don't observed the migration at the begin of October.

The nightjar is a very useful bird because it feeds with numerous very pests insects to agriculture and forestry.

Unfortunately, the number of individuals of this species in Tinca area lessens considerably, because the antropic influence are still marked. This influence materializes through the still marked penetration in the afforests lands, the deforestations of the arson of the protection's girdles formed from the shrubs from the agricultural areas, the chemification sometimes marked of the agroecosystems, the accidental or premeditated destruction of the eggs meted often on the paths of the forests, the proliferation of the rover or semiwild dogs who destroys in this way the eggs or the chicks.

CONCLUSIONS

In the Tinca area, the nightjar have 1 – 2 generations, is an insectivore bird, presents a colouring with role in procrypsis.

REFERENCES

1. Berindei I., Pop G., 1972, Județul Bihor. Editura Academiei R.S.R., Bucureşti, pp. 35-43.
2. Ciochia V., 1992, Păsările clocitoare din România, Editura Ştiinţifică, Bucureşti, pp. 126-133.
3. Dombrowski R., 1912, Ornis Romaniae, Staatsdruckerei, Bucureşti, pp. 40-56.
4. Ilie A., L., 2008, Monografie faunistică – Păsările din zona Tinca (jud. Bihor, România), Editura Sitech, Craiova, p. 57.
5. Ilie A., L., 2008, Păsările din zona satului Tinca (jud. Bihor) în timpul sezonului serotinal, Revista Pro Educația, Tinca, Anul I, 2:7-10.
6. Ilie A., L., 2011, Aspecte inedite ale faunei de vertebrate din zona Tinca (jud. Bihor, România), Revista Pro Educația, Tinca, Anul III, 6: 23-30.
7. Ilie A., L., 2012, Menționări faunistice noi în zona Tinca (jud. Bihor, România), Revista Pro Educatia, Tinca, Anul IV, 8:41-49.
8. * * *, 1994, Atlasul provizoriu al păsărilor clocitoare din România, Publicațiile Societății Ornitologice Române, Mediaş: 81.
9. * * *, 2002, Atlasul păsărilor clocitoare din România, Ediția a II-a. Publicațiile Societății Ornitologice Române, Cluj-Napoca, p. 120.