THE CONSUMPTION BEHAVIOUR IN CHLIDONIAS HYBRIDUS.
THE MODIFICATION OF THE FUNCTIONAL BEHAVIOUR AS AN ANSWER OF THE EXOGENOUS FACTORS

BY

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Key-words: Chlidonias, hybridus, behaviour, individual.

Abstract: In the consulted literature it hasn’t been found ethological study about Chlidonias hybridus species. The individual behaviours (without semantic value) are: locomotion, comfort activities and appetitive activities. Through comparative analysis with other aspects from the species life, we can establish that these manifestations that are initially without semantic value becomes interspecific language (by ritual way), without it, the reproductive period wouldn’t have been consumed.

Introduction

Principally, the ethogrames cover as a knowledge level two essential aspects from the total manifestation of the species taken for study: a) individual behaviours or behaviours without semantic value and b) interindividual behaviours or behaviours with semantic value.

Material and method

The ethological observation were realized on Chlidonias hybridus species – Whiskered Tern, during 2003-2004. There have been used the direct observation on the tern individuals in the migration period and also, in the reproduction one.

Results and discussions

The Whiskered Tern presents three types of locomotion: walking, swimming, flying.

Walking. The changing of place in the whiskered tern on a solid surface is done by walking. This way of moving may be observed mainly during the interindividual behaviour: in nuptial games, mating, in the territorial fights, activities connected with the selection of the nesting place, in the ritual of changing partners at the nest, in activities connected with eggs rolling during the hatching, in the feeding of the chicks at the beginning of the postembryonic growth.

The chicks begin to walk even in the second day of the hatching.

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The walking in the whiskered tern is made by stepping over. It has been observed a slight swelling of the feathering at the neck and head during walking. It hasn’t been observed any jump. The take-off in the case of flight or flight exercises in the chicks of almost three weeks is connected with the changes of place through walking. The longest changes of place by walking have been observed in chicks in case of alarm. They can run a few metres, stopping at the first shelter.

Swimming. The chicks begin to swim at the approximate age of 3-4 days. I observed chicks at this age, that the alarm signal swim a few metres, hiding by the aquatic plant stems until the enemies leave the colony territory. Usually, smaller chicks which try to swim (in case of danger) dye drowned.

The adults don’t swim, but some swimming gestures with the feet after the diving and before taking back the flight have been observed like in the Common Tern case.

Flight. The flight is the main way of locomotion of the whiskered tern. The bird manifests the biggest part of the consumption behaviours (change of place, feeding, intraspecific and interspecific coactions) during the flight.

Depending on the flight characteristics of the birds, we framed the *Chlidonias hybridus* species in the group of the species which in their flight execute the constant flight. From the morphological point of view, *Chlidonias hybridus* has a narrow wing with a sharp top which is perfect for this type of flight.

The whiskered tern take-off is usually done through fast beatings of the wings getting a certain speed. Next, there is a vertical and an oblique forward raising through which the bird obtains a sufficient horizontal speed, and then passes in the next phase, the constant flight. During the flight, the individual keeps the axle (in length) of the body horizontal or slight inclined up and forward and performs beatings of the wings up to down and forward to backward.

The whiskered tern landing begins with the decrease of the flight speed, then it continues with the wings laying perpendicular with the flight direction, the spreading of the taily feathers and the surface contact. The bird can also perform some wings movements after the solid surface contact.

During the whiskered tern feeding behaviour, but also during the chicks feeding by de parents, the flight is characterized by the fast beatings of the wings, the tail is spread and it serves as a sustainable umbrella when the birds “stay” in the air. This type of flight is called fluttering. In the case of the fish or aquatic insects hunting, this flight is followed by fast plungings on the water surface and by the bird raising from an oblique position to a forward one.

There are elements which can modify the flight in *Chlidonias hybridus* from the behaviour viewpoint. These modifications give the deviation impression to an abnormal one. In fact, they represent conflict situations and win a signal value.

For example, these modifications appear when there is a danger that requires the direct intervention of the affected individual (the chasing of the enemy). This way of flight has been observed only during the nestling and after the chicks hatching, it hasn’t been observed in the other part of the year. Generally, it is unleashed by enemies like snake, raccoon dog, water rats, magpie, crow, human being, etc. The individual performs
aggressive territorial flight in order to chase and go away the danger from the nest and from the colony territory. It raises above the source that generates the danger, performing the fluttering flight; then, the number of the wing beatings increases, the flight becomes a skimming the ground one; usually, the collisions are avoided by lateral deviation. Right before the direction change, the tern slows the beatings, performing the gliding flight. The gliding lasts very little, the intensification of the wing movements comes immediately. The group defence is a characteristic for *Chlidonias hybridus*.

**Comfort activities**

The whiskered tern comfort activities are the feathering cleaning, the bathing, the scratching and the rest. These activities can have a double role, being a necessity of an individual behaviour, but they can be included in the species ethogram, having an interindividual and a semantic value.

**The feathering cleaning** usually begins with the abdomen, the bird passing the feathers through the beak one by one. The next thing that follows is rubbing with the beak the uropygial gland, then the bird is shaking with half-opened wings and after that it passes again to arrange the abdomen. The next is the cleaning of the shoulders, wings and finally the tail. The superior part of the neck and the head feathers are greased by rubbing them by the shoulders. The uropygial gland massage and the feathering shaking take place after each region has been arranged. The feathering arrangement and its greasing with fat are very important for the individual and necessary for the behaviour unfolding in harmony.

The scratching is made using successively the inferior members.

The feathering cleaning initially seems to be a behaviour link without a semantic value framed in the comfort behaviour group. But, through comparative analysis with other aspects from the species life, we can establish that this manifestation that was initially without semantic value becomes now interspecific language, without it, the reproductive period wouldn’t have been consumed. In this case, this manifestation becomes a conflict state (the cleaning being phylogenetically fixed by ritual way), being a way to approach partners in advantageous conditions (related behaviour). The advantageous conditions are, in the male – female dialogue, ritual answers in order to decrease the aggressiveness at the ritual aggressive challenge. The extent of the wing does not characterize the individual only for the described aspect, but it may represent a deliberate movement, which generally precede, the abandonment of the stationary place (the take-off). The finished or unfinished movement is linked to the individual state (the search for food, the threat of a danger).

There has been observed that the extent of the wing as a deliberate movement in *Chlidonias hybridus* usually proceeds at the flock level, having here a signal value, one individual cautious the others to fly, but, usually, they take-off only when a lot of individuals raise their wings.

**The bathing** usually takes place in the rest places during the day. These places are near a solid surface (reed clusters, small sand bars, shore, etc.).
The bird touches the water with the abdomen, having the neck stretched and the beak raised. The raised neck shows us that the bird isn’t in an aggressiveness state. Also, the individuals keep the wings in a far-off way and with the help of them beat the water, sprinkling their bodies. The next thing is rubbing the superior part of the neck and head with the uropygial gland, then the arrangement of the feathers from the wings and under them. All these events alternate with shakes. The bathing ends with the feathering swell, the successive extent of the legs and wings, then with the tail shake. Usually, after the bathing, the bird rests, having the head between the shoulders.

The beginning of the bathing of a tern is a sociosignal for the conspecific individuals.

The rest represents the proper repose of the individual, meaning the sleep. The sleep is a comfort activity which takes place during the day and night. During the nestle period, the sleep length reduces because the bird has a crepuscular activity, leaving early the nestle place (04 °°), flying towards the hunting places. Sometimes, the activities last longer, after twilight. During the sleep, the bird keeps the head between the shoulders; it can stay on one leg or both.

As a way of doing sleep has two aspects (Ion and Stănescu, 1992):

a) the proper sleep (itself);
b) the false sleep.

In case of the proper sleep, the bird has the eyelids closed. The sleep is very slight and at the smallest suspect noise the birds open the eyes.

The false sleep is a rest in a vigilant state. In this case, as an aspect, the bird looks like the one that really sleeps, but at the smallest suspect noise the individual raises to fly.

Generally, the rest, the feathering arrangement and the sleep develop after the bird has eaten. During the hatching, these comfort activities develop around the nest and, in the other part of the year, they take place in the rest places chosen by the flock individuals on the little ground islands in the middle of the ponds, reed clusters, the agricultural plants remains. Usually, the comfort activities develop in group like the others activities of the species.

Little chicks, in the first 2-3 days of their lives, sleep almost all the time, except the moments when they are fed by the parents.

Appetitive activities (getting food, drinking, breathing, excretion, etc)

The Whiskered Terns get their food only during the flight. This develops above the water at a height between 1m and 5-6 m. The flight is characterized by plungings towards the target. During this action, the bird positions the beak at almost 45 ° or even more, given the long axle of the body. This beak positioning usually precedes the diving moment for food. The prey is caught during the flight.

During the feeding, the bird pays attention to the wind direction, having the body positioned in its direction. The success in food hunting depends on the food plenty, the prey size, the wind speed, the last one contributing to the instalment deficiency in capturing the prey when the speed is high. The food can be caught on the water surface,
The consumption behaviour in *Chlidonias hýbríðus* (…)

from the air or vegetation. During the insect feeding from the air the bird has a flight that consists of steep diving.

During the observation, there haven’t been observed *Chlidonias* individuals that drink water. Not even in the consulted literature there hasn’t been found information regarding this appetitive behaviour so far. We presume that the tissual water obtained from the eaten food and from the one taken with the aquatic prey capture is sufficient to maintain the vital functions.

Usually, the *Chlidonias* species feed in smaller or bigger flocks, depending on the year period, sometimes together with other species such as *Riparia riparia* (Sand Martin), *Larus argentatus* (Yellow-legged Gull), *Larus minutus* (Little Gull) etc.

During the ground observation there haven’t been observed excrements around the nest. In the stressed situations, such as the penetration of the same enemies in the colony, there has been observed faeces splash against them.

**Conclusions**

1. The consumption behaviours (individual, without semantic value) are characteristic for the individual as a specific entity.
2. These behaviours ensure fundamental necessities of the individual and they are:
   - locomotion: walking, swimming and flying;
   - comfort activities: feathering cleaning, the bathing, the scratching and the rest;
   - appetitive activities: getting food, drinking, breathing, excretion.
3. Knowledge of these manifestations is important for their fragmental or integral recognition as an inclusion in languages and rituals.

**Bibliography**