

# OBSERVATIONS ON THE FOOD AND FEEDING HABITS OF WHITE- EYE

DR. PUSHPA CHOUDHARY  
ASSISTANT PROFESSOR  
DEPARTMENT OF ZOOLOGY  
A.N.D.N.N.M.M. KANPUR

## **ABSTRACT**

*The Indian white eye (zosterora palpebrosus) formally the Oriental white eye is a small passerine bird in the white eye family . They forage in small groups , feeding on nectar and small insects . They are easily identified by the distinctive white eye ring and all over yellowish upperparts. They range previously extended to southeast Asia. Most birds feed their chicks with animal food during the few days after hatching, even those birds that feed mainly on fruits and grains. The Oriental White-eye (Zosterops palpebrosus) is no exception. This bird feeds on insects, fruits and nectar from flowers. The young have been observed to be fed mainly on caterpillars. The images above show the chick at various ages being fed with succulent caterpillars. Other invertebrates like spiders and ants are also popular (below). However, no plant food was seen delivered to the chicks. This is understandable, as growing chicks need proteins more than sugars and carbohydrates.*

## **Introduction:**

White eye (Zosterors Palpebrosa) , family- Zosteropidae. The white eye belonging to Zosteropidae a large family of small birds. The whole upper plumage is greenish golden yellow, the concealed portions of the wings and the tail is dark brown; a white ring around the eye, emphasized in front and below by a clock mark; and under tale converts yellow . The iris is yellow brown; bill black , bluish grey on base of lower mandible; legs plumbeous . The sexes are alike. The white eye or Zosteropidae has a distribution in Africa, Southern Asia and Australia. The present species has a wide distribution in Asia and divided into number of races, of which we are concerned with four only, which differ only in small details of size and tenth of coloration . the typical form is found from Sikkim and Bhutan eastwards to Assam and Yunnan and southwards to Bengal and probably Asia and the eastern Central provinces. Zosterors Palpebrosa occidentis is found along the Himalayas from the extreme north west to Nepal. In the plains it is found as far West as Kohat and from where it extends through the whole of North Western India, south of Mysore. In India it is unknown except for a small isolated colony in the mangrove swamps of Karachi. Zosterors Palpebrosa nilgirensis is the race found in Nilgiri and Travancore ranges , while Zosterors Palpebrosa slimely is confined to eastern ghats as far North as the Godavari. Mainly resident species the white is also locally migratory. The white eye is purely arboreal species which practically never descends to the ground.

The parent birds are kept busy all day long, flying off to forage and returning to feed the chicks. But when they return, they do not fly directly to the nest. They perch nearby and survey the surroundings (left). Only when all is clear do they fly to the nest. Once the bird lands by the nest, the vibrations will cause the chicks to open their mouths fully, even just after hatching when they are blind. And without fail, every chick in the nest will strain its neck upwards with mouth wide open, ready to be fed.

**Reference:YC Wee  
& Melinda Chan**  
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(Images by Chan  
Yoke Meng)

Unlike raptors and such where the parent tears off pieces and feed the chicks one by one, here, every trip brings only food for one chick. Therefore the oldest and naturally the most aggressive of the chicks usually ends up with the most food. In the recent nesting of the white-eye at Kent Ridge, the original three chicks ended up two. The missing chick, obviously the youngest and weakest, was probably dumped out of the nest by its two siblings or else fell off. This was the case in an earlier documentation where the third chick was found on the ground below the nest.



What becomes apparent once the chick gapes is the reddish colouration of the inner area of the mouth, lined with prominent swollen yellow oral flanges, believed to be “food targets” for the parents (right, arrows).

Immediately after feeding a chick, the adult moves to the rear of the fed chick to await the faecal sac. With its beak, it carefully picks the sac as it appears from the cloaca to dispose it some distance away.

### **OBSERVATION :**

nest construction and nest site selection is done with the priority that the nest should have good availability of nesting material, food, shelter from predators and proper light and aeration. The female is responsible for the entire nest building. The male does not take any part in the process. female collects the material for the nest building whatever available near the nesting site. Nest building occurs in 10 to 40 minutes during which material is brought to the site and let down. The white eye Nest is well camouflaged properly. Creditors include crows, eagles, monitor lizards and snakes, which have an easy access to the eggs and chicks. Its nest was built up highly eucalyptus trees m

### **THE NEST:**

The nest shape was a delightful little Cup slung like a miniature oriole's nest between two twigs made of very fine grass and stems, coated with the cop webs exteriorly and also has pieces of vegetable. A complete nest weighs around 2.15 gram and has a diameter of 5 cm and a cup depth of about 8 cm and is three metre above the ground on the tree. A peculiar incident occurred while the study was being done. The branch which held the nest fell due to heavy wind. The nest had the hatching also. I picked up the branch and attached it temporarily to another bigger branch of a nearby tree. The nest wings and nest completely their full-term there.

### **EGG- LAYING:**

The first egg is laid within 4 days after the completion of the nest. The nest was completed on 20 April 2001 and the first egg was laid on 24 April 2001 at 7:15 a.m. the second egg was laid on 25 April 2001, in the morning at 8:10 a.m. the eggs were laid on alternate days.

#### **THE CLUTCH SIZE:**

The clutches size is of 2 eggs. The average size of an egg is 0.62- 0.47 inches.

#### **EGGS:**

In shape the eggs is somewhat Lengthened and good deal pointed towards the smaller end. The texture was very fine practically without gloss . the colour was very delicate and pure pale blue or greenish blue without markings.

#### **INCUBATION:**

Incubation is to apply heat to the eggs for the development of the embryo. The female from the most part incubation. Both sexes incubate the eggs, the female usually by night and the male with the period lasting from the morning. Incubation varies from 12 to 13 days. When the female goes out for the food and much needed outings, during this relief period the male may sit on the eggs and stay on or near the nest as if on guard duty.

after a period of incubation the eggs hatch out generally in the order in which they were laid. The time between the length of the last egg and hatching of the first has been reckoned here as the incubation period

#### **HATCHING TIME:**

The hatching of the first leg took place on 5 Mai after and incubation period of 12 days and hatching time was 8:15 a.m. the second egg hatch at an interval of 24 hours on 7 may and hatching time goes about 10:25 a.m. next life of nestling physical features of hatching .

The hatching are nidicolours. The newly hatched young are fleshy pink in colour. The back and claws are soft the mouth cavity is reddish in colour without any directive marks. The eyes are closed. The nest links call so flee and direct their bills towards the source of food. the three days old nestlings are able to raise their heads more efficiently to receive food and utter begging calls.

When they are eight days old open their eyes fully, wild coloured feathers grow on breast. Tails also comes slightly longer. Then a covering of feathers starts on the upper tail under the tale they also start body movement.

9 to 12 days onwards whole body of The young is covered with feathers. Upper and lower mandibles Tighten . when the young ones are 12 to 14 days old they are ready for flying and they start flying with their parents. These birds have a speciality that they sit on the ground for a less time. When they are 17 days old they leave the nest and for some time they live in that area only. I had observed that the nestling's growth for 17 days continuously daily for 6 hours (5:00 l- 11:00 am) in the morning and 4 hrs (2:00- 6:00 pm) in the evening. Brooding care and feeding of The young.

The fresh she had two young are kept warmer during the night by the brooding mother and protect it from the hot sun during that they were both parents to take turns at brooding.

Predators include crows, eagles, monitor lizard and snakes, which have an easy access to the eggs and chicks. Its nest was built up on high eucalyptus tree.

### **THE NEST :**

The nest shape was a delightful little cup slung like a miniature Oriole's nest between two twigs made of very fine grass and stems canted with cop webs exteriorly and also an pieces of vegetables. A complete nest weighs around 2.15 gm and has a diameter of 5 centimetre and a cup depth or about 8 centimetre and is 3 meters above the ground on the tree. A peculiar incident occurred while the study was being done. The branch which held the nest fell down due to heavy wind. The nest had the hatchings also. I picked up the branch and attached it tempo- rarely to another bigger branch of a nearby trace. The nestlings and the nest completed their full term there (Plate No. 1).

### **EGG LAYING :**

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### **Eggs :**

In shape the eggs is somewhat lengthened oval and good deal pointed toward the smaller end. The texture was very fine practically without gloss. The colour was very delicate and pure pale blue or greenish-blue without markings

### **Incubation :**

Incubation is to apply heat to the eggs for the development of the embryo. The female Tor the most part does the incubation. Both sexes incubate the eggs, the female usually by night and the male with the period lasting from morning. Incubation varies from 12 to 13 days. When the female goes out for food and much needed outings, during this relief period the male may sit on the eggs or stay on or near the nest as on guard duty. After a period of incubation the egg hatch out generally in the order in which they were laid. The time between the laying of the last egg and hatching of the first has been reckoned here as the incubation period

### **Hatching Time :**

The hatching of the first egg took place on 5 May after an incubation period of 12 days and hatching time was 08:15 AM. The second egg hatched at an interval of 24 hrs. on 7 May and hatching time was about 10:25 AM Nest Life of Nestlings Physical Features of Hatchling The hatchings are nidicolours. The newly hatched young are fleshy pink in colour. The back and claws are soft. The mouth cavity is reddish in colour without any directive marks. The eyes are closed. The nestlings call softly and direct their bills towards the source of food. The 3 days old nestlings are able to raise their heads more efficiently to receive food and utter begging call. When they are 8 days old they open their eyes fully, while coloured fathers grow on breast. Tail also becomes slightly longer. Then a covering of feathers starts on the upper tail and under the tail, they also start body movement. 9 to 12 days onwards whole body of the young is covered from feathers, upper and lower mandibles tighten. When the young ones are 12 to 14 days old they are ready for flying and they start flying with their parents. These birds have a specialty that they sit on the ground for a very less time. When they are 17 days old they leave the nest and for some time they live in that area only. I had observed the nestling's growth for 17 days continuously daily for 6 hrs (05:00 – 11:00 AM) in the morning and 4 hrs (02:00 – 06:00 PM) in the evening. Brooding Care and Feeding of the young The freshly hatched young are kept warmer during the night by the brooding mother and protected from hot sun during the day by both parents who take turns at brooding.

The brooding by day stops under 3-5 days of the emergence of the hatchling, but brooding at night by the female continues till the chicks are partially fledged that is, when they are 14 – 15 days old. The nestlings are never left unguarded, one of the parents is always around, especially during the early days, to guard them



from predators, to warn them of any approaching danger or to protect them from hot sun and rains. The feeding activity started in earnest from the first day of the first hatching. Both parents bring food and feed the young. The young are fed on insects, weevils, ants, their eggs and larvae and on vegetable matter, small buds, seeds and wild fruits. When the female bird goes to get food for chicks the male is present, near the chicks and if the male bird is out for any reason, female bird is present. I observed the parents bringing food for their chicks within a span of about 10 minutes at regular intervals.

### **Nest Sanitation :**

The White-eye keeps the nest clean and tidy. The faeces of the young enclosed in a delicate faecal sac. At each trip, after feeding the young the parent waits for the young to eject the faecal sac. If and when ejected the sac is devoured by the parent, especially during the earlier days. Both sexes share the task of nest sanitation.

### **Discussion :**

The present investigation of the nesting behavior of White-eye *Zosterpos palpebrosa* studied started in April, 2001. The White-eye are very social. The White-eye is a purely arboreal species which practically never descends to the ground. Observed that only females are responsible for nest building, male does not take any part in it. The nest site is selected by the female. Nests are situated near areas which provide suitable food supplies. A completed nest weighs about 2.15 gm and this bird is of diameter 5 cm and 9 cm. While the red whiskered bulbul's nest weight is 7.30 gm. The nest building behavior of the red winged black birds has been studied by Nero, 1956, Hinde 1958, Nice 1957. Nest site selection and the importance of nest concealment have been observed in the black throated blue warbler by Halway 1991 and Keppie and Hersog 1978. During present study it was observed that the nest is cup shaped. Only the female is responsible for nest building. The male does not take part in nest building. Female collects the material for nest building whatever material is available near the nesting site. The material includes grass with stems coated with cob webs outside pieces of vegetables. White-eye chooses a site which is at a height to protect the eggs from predators as also observed by Ingold 1994, Martin 1993, Henry 1969. Egg laying in White-eye was at an interval of 4 days after the completion of nest building. The eggs are laid on alternate days. The clutch size was of 2 eggs. Similar studies on egg laying pattern have been done by Klomp (1970), Safriel 1975 and Walters 1983 in precocial birds. Both sexes incubate the egg. The incubation period is the onset of full day time incubation have been observed in the mountain white crowned sparrow (*Zonotrichia leucophryl oriantha*, Zebra and Morton, 1983) and the Great Tit (*Parus major*, Haftorn 1981). 12 to 13 days. Similar delays in the young of White-eye are nidicolous and enjoy good parental care. All the other birds under my study, black drongo, Ashy-wren warbler, Red whiskered bulbul also have nidicolous chicks. Similar studies have been done by Bryant and Tatner 1990. Parental care in birds has also been studied by Pierotti, 1981 and Ridlly 1978. Nesting behavior has an important aspect and that is nest sanitation, which was also observed in marine birds as studied by Schmidt 1960.

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