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Sun-bathing by Yellow-legged Green-Pigeon *Treron phoenicoptera* at Vadodara, Gujarat, India

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Introduction

The Yellow-legged Green-Pigeon *Treron phoenicoptera*, commonly known as 'green pigeon', is a widespread resident of India (Ali & Ripley 1983; Grimmett et al. 1998). It is largely arboreal, but descends to the ground occasionally. It feeds on drupes, berries and wild figs of numerous species of *Ficus*. It keeps in flocks of 5–10, sometimes congregating in larger numbers to gorge on ripe banyan *Ficus benghalensis* or peepul *F. religiosa* figs in company with the other birds (Ali & Ripley 1983). In this note I record an instance of mass sun-bathing of the green pigeon, on a single tree in Vadodara.

Vadodara city (22°18'N 73°10'E), in Gujarat (India), famous for its heritage of large numbers of banyan trees, is a good habitat for green pigeons. They are common in areas like the Maharaja Sayajirao University of Baroda campus, Harni,

Laxmivilash Palace campus, Lal Baug, and railway station in flocks of two to forty (*pers. obs.*), perching on *Ficus* trees. However, it is difficult to spot perched birds as they get camouflaged in the surrounding leaves.

Observations

On 21.xii.2005, at 07:30 hrs, I counted 89 fluffed-up Yellow-legged Green-Pigeons sun-bathing on the branches of a dry and leafless *Cassia siamea*. The tree is located in the Oil and Natural Gas Corporation (O.N.G.C.) campus, in Tarsali area (22°15'N 73°12'E), about 9 km from Vadodara railway station. The same number of birds was counted again at 08:15 hrs and 09:30 hrs. All the birds had oriented themselves, at an angle to face the sun. Their feathers were fluffed and they perched close to the branch, covering their tarsi with feathers. Their necks too were retracted into the fluffed feathers. They had left by 10:30 hrs, when

the temperature was about 15°C. The minimum ambient temperature of previous night was 9.8°C.

The green pigeons were seen perched on the dry tree only in the morning, and recorded continuously for 19 days from 21.xii.2005 to 8.i.2006 on that tree. However, their number and duration of perching varied (Table 1). The minimum ambient temperature during this period varied between 9.8°C and 12.4°C. No other activity was observed at this time, except occasional preening. The birds perched till 09:30 hrs on cool days unless they were forced to fly due to some disturbance.

Discussion

The dry *Cassia siamea* was adjacent to *Pithacelobium dulce*. Besides this the entire area of O.N.G.C. and Baroda dairy campus is full of vegetation such as *Peltoforum*, *Cassia*, *Prosopis*, Neem, Peepul, Banyan

Table: Sun-bathing by Yellow-legged Green-Pigeon

Date	Time (hrs)	No. of birds	Date	Time (hrs)	No. Of Birds
21.xii.2005	07:30	89	29.xii.2005	07:10	2
	08:15	89		07:45	2
	09:15	89		09:00	5
	10:30	0	30.xii.2005	07:45	12
22.xii.2005	08:15	90	31.xii.2005	07:45	15
23.xii.2005	07:45	89	1.i.2006	09:00	36
	07:15	90	2.i.2006	07:45	15
24.xii.2005	09:30	87	3.i.2006	07:45	15
	10:15	0	4.i.2006	08:20	25
25.xii.2005	07:15	92	5.i.2006	07:45	45
	08:15	90	6.i.2006	08:30	60
	08:45	0	7.i.2006	08:15	15
26.xii.2005	07:10	88	8.i.2006	08:30	30
	09:15	0		09:00	30
27.xii.2005	07:45	60		09:40	0
	07:45	15			
	09:30	40			

etc. However every time all the birds were observed on the same dry tree. It seemed that by perching on such tree, the pigeons were directly exposing themselves to sunlight, and thus warming up during the cool mornings.

Sun-bathing is a form of thermo-regulatory behaviour, in which a bird absorbs heat from the sun and hence reduces the metabolic expenditure needed to maintain its optimum body temperature, especially in cool or cold conditions. It may occur during loafing and preening spells at any time of the year (in temperate regions, especially in spring, autumn, and winter) and at any time of the day (in tropical regions,

especially during the early and late hours, particularly on cold nights) (Simmons 1985). Sun-bathing has been observed often in other genera of the Columbidae, like *Columba* and *Streptopelia* (*pers. obs.*). Surprisingly, normally camouflaged birds become conspicuous during this process of thermoregulation.

The green pigeons spent more than two hours sunning themselves on 21.xii.2005 and 24.xii.2005. They are, perhaps, able to allocate so much time to sun-bathing as their food is sedentary (growing on plants) and they do not have to spend time searching or chasing after it.

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Black-necked Stork *Ephippiorhynchus asiaticus* nest with four chicks in Marine National Park, Gujarat, India

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(See photo on back cover)

Globally, the Black-necked Stork *Ephippiorhynchus asiaticus* is classified as Near Threatened (BirdLife International 2004). It generally raises a successful brood of two or three young. So when I was informed by Mr Radadiya, ACF, Marine National Park, Jamnagar, that he has seen a nest of Black-necked Stork with four chicks at Jodiya Range of Marine National Park (Jamnagar district, Gujarat), I knew this was a rare occurrence. The nest was 60 km from Jamnagar and I visited it on 22.xii.2005. On the advice of Radadiya, two forest staff of Marine National Park accompanied me. The nest was on a neem tree *Azadirachta indica* (c. 19 m above the ground) situated on the cotton farm of Sri Chhaganbhai. When I reached the area I could see the adult male and female Black-necked Stork along with one juvenile on the nest while two chicks were on the ground. However, I could not see the fourth young one. In the meantime I took a few pictures of the nest with young. Perhaps disturbed by our presence, the adult storks flew from nest followed by the two young ones on the ground. The third juvenile, remained on the nest for a while and later followed the rest of the family. But I had not yet spotted the fourth juvenile. So I stayed the night at Jodiya and went searching for the family the next day. A short while later we found all the four juveniles along with the female stork in the nearby river. Probably this was the first time all the juveniles had left the nest.

In Dudwa National Park, Uttar Pradesh, nest building starts around August and chicks hatch around second week of October (Maheswaran 1998). One nest with three chicks was observed in 1996 but only two survived by the time they dispersed from the nest around mid-February. However, in Etawah and Mainpuri districts of Uttar Pradesh, Black-necked Stork start nest building around mid-August and chicks hatch by mid-January. According to Sundar (2003), breeding success was very low with only one young fledged successfully out of four nests that he observed. According to Maheswaran et al. (2004), population of the Black-necked Stork appears to be declining in India except Gangetic plains of Uttar Pradesh and north-western India especially Gujarat where populations are stable or marginally increasing. My observation of nest with four successfully fledged chicks supports their claim. To raise such a big brood, storks require an enormous amount of food, especially freshwater fish. The area still supports several freshwater wetlands with abundant fish, which provide an uninterrupted food supply for Black-necked Storks during their breeding season.

The RFO, Shri B.K. Shilu and his staff took good protective care of the nest and the storks during the nesting period.

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Zafar Futehally would like to offer an award of Rs 5,000/- for the most enjoyable article in *Indian Birds* in the year 2006. The article will be judged by its success in combining its scientific quality with a light-hearted and enjoyable style. The award is offered in memory of his daughter Shama.