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Adoption Of Brahminy Myna *(Sturnus pagodarum)* To Artificial Nest and Dietary Shifting During Drought in Sangola Taluka of Maharashtra State (India).

KEYWORDS

Sturnus pagodarum, Nesting, Brahmny myna, Drought, diet

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ABSTRACT *Brahminy myna Sturnus pagodarum is widly distributed all over India. It was also recorded in Pakistan, Nepal, Cylon, Thailand. he Brahmny Myna builds its nest in hole by using grass and feathers. Breeding or nesting period is ranges from March to September and it may vary with geological as well as climatic conditions. Three pairs of Brahmny myna breed in April-2016 having 3 young each. Second batch of three pairs breeds during July 2016 having 3 to 4 young. During present study Brahmny myna preferred noodles to eat and same food is fed to their young and brought them to feeding place after first flight out of nest. It was might be due to use of tactic of shifting of diet during drought to overcome with harsh environmental conditions*

Introduction

India is one of the 12 'mega diverse' nations of the World rich in biodiversity. In Indian subcontinent about 1300 species are found out of 9000 bird's species of the world which constitutes about 13% of the world's bird population (Grimmett et al., 1994). Birds are the most important ecological indicator of environment (Bibby et al., 1992). The study of birds gives information about climate change and biodiversity distribution Crick, 2004). In India rainfall is brought about by southwest monsoon and northeast monsoon. The southeast monsoon brings rainfall across northern India and along western coast while northeast monsoon (reverse monsoon) brings rain across several parts of South India. Monsoon pattern of India have major impact on reproductive cycle of Indian birds (Ali and Repley, 1987). In arid and semiarid region scare rainfall resulted in distribution of plants and animals which are documented by different researchers (Bolger et al., 2005; Grant and Grant, 1987; Bong and Grant, 1981).During drought many breeding pairsof birds species showed delay in nesting for several weeks, Maclean,1973; Lloyd 1999; McCreedy et al., (2015).

Brahminy myna *Sturnus pagodarum* is widely dispersed all over India. It was also recorded in Pakistan, Nepal, Cylon, Thailand (Ali et al, 1983; Baker 1926, Kazmierczak 2008). Brahmny myna is known with different names locally in different states of India, as Bramani Kabar or Babbai (Gujarati), Kalasir Myna (Hindi), Harbola (Bengal), Bamani Myna (Bengal and Bihar),Popoya Myna (Marathi), Pabiyapawi (Hindi-UP), etc. In hindi or Marathi language myna means young girl. Now a day officially B. myna was named as "Brahmny Starling". The sexes are morphologically much alike except for the female is a slight smaller. In both the sexes black crest is present on head. In male the crests are more prominent than those of the females. The body colour is pale reddish-fawn Plumage. The beak is yellow with a bluish base. Young of B. myna have light reddish-brown face, sides of neck, throat and beneath parts reddish-orange, vanishing to white under tail (black wing quills). B. myna mimic the sound of other birds very easily. The Brahmny Myna builds its nest in hole by using grass and feathers. Breeding or nesting period is ranges from March to September and it may vary with geological as well as climatic conditions. June to September and female lays about 4 to 6 eggs (Kumar et al.1991).

Material and methods:

Study area

Sangola taluka is one of the 13 talukas of Solapur district considered as drought prone region come under semi-arid zone of Maharashtra state of India. Sangola taluka is stretched between longitude 17° 26' 22" N latitude and 75° 11' 37"E longitude. The rainfall is very scanty and ill distributed. Average rain fall of Sangola during last 2014 and 2015 was 463.5 and 492.9 mm respectively.

Domestic feeding and breeding ground:

Present study was carried out in drought prone semi-arid region Sangola of Solapur district (MS) India during severe drought year2014-15 and 2015-16. Provision of domestic feeding site and arrangement of drinking water was made in the Premises of house from month of April, 2013 in such a way that birds can easily locate it. Food constituted bajara, jawar, rice grains and noodles prepared from gram floor. For breeding purpose specially designed 15 artificial nest prepared from plywood with 2.5 inch entrance hole were fixed onto the wall at the height of 10 to 12 feet.

Results

Present study is an attempt to study behavioral changes in birds during drought period. According to Akhtar (1990) Brahmny myna was not found in the more arid and barren area of the Punjab, Sind, and North-West border region and in humid and over- grown localities of lower Bengal etc. Even though the study region is come under drought prone semi-arid zone of India, Brahmny myna are adopted to such environment.

Drought-induces latency in vegetation therefore has dramatic effects on animals, generally in birds to withstand with droughts situations and changes in vegetation by using behavioral and physiological tactics, including opportunistic movement away (in birds), shifts in habitat (Dean 2004). The present study out of fifteen nest 12 nests were occupied by Passer domesticus for breeding and three nest were used by Brahmny myna. Three pairs of Brahmny myna breed in April-2016 having 3 young each. Second batch of three pairs breeds during July 2016 having 3 to 4 young. But It was little bit difficult to know whether the breeding pair was same or different. Both the parents involved in feeding young.

If birds make the decision to remain in their area during a drought, they have several options to increase their chances of survival and such birds can shift their diet to eat a wider range of items and join mixed-species foraging flocks. Very little information is available about such tactics being accepted by birds during drought years. Additionally, the benefits of all tactics have to be functioned in contradiction of the losses due to adverse environmental conditions (Dean et al., 2009; Dean 1999).

Narang and Lamba (1984) analyzed gut contents of Sturnus pagodarum proved that these birds fed chiefly on grasshoppers, crickets, caterpillars, ants, beetles and lantana berries. According to Ripley (Ganguly (1975); Ali (1968), Ali and Ripley (1972), the food of Sturnus pagodarum comprises of berries nectar of flowers, insect diet included grasshoppers, moths and caterpillars etc. In present study Brahmny myna preferred noodles to eat and same food is fed to their young and brought them to feeding place after first flight out of nest. It was might be due to use of tactic of shifting of diet during drought to overcome with harsh environmental conditions. Brahmny myna is omnivorous and also feeds berry of plants. Most of

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time these birds feeds on the ground in the party of six to seven and in company with other species of Mynas and Starlings, etc. (Rai 1982) .It was also noticed that B. myna feed in company with other birds such as common myna, red vented bulbul, babblers, robins, sparrow, pigeons, doves, etc. from above observation it was very clear that BM used tactics of shifting dietary habit towards the artificial food for survival during extreme drought situation. Many ornithologist studied behavior and reproduction of myna in captivity. And concluded that bird like myna soon becomes very tame and robust (Kumar et al. 1993). From present study, it was cleared that Brahmny myna can be domesticated and can be easily used for captive breeding by providing artificial nest and food. Such type of study will definitely help in conservation of birds like Brahmny myna during extreme hard environmental conditions. This study will be helpful to develop strategies and polices regarding biodiversity conservation in various field of fauna.

Figure 1 Group of Brahmny myna on domestic feeding ground

Figure 2 Brahmny myna feeding young

Figure 3 Young of Brahmny myna

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