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MIXED-COMMUNAL ROOSTING OF INDIAN WHITE BACKED VULTURES IN POONA

WHILE observing the roosting behaviour of some common birds of Poona (Maharashtra) and around, from January 1976 to February 1977, I came across number of mixed-communal roosts of birds.

Usually the associates which I have observed at such roosts are Indian Mynas, *Acridotheres tristis* (Linn.); House and Jungle Crows, *Corvus splendens* Vieillot and *C. macrorhynchos* Wagler; Pariah Kites, *Milvus migrans* (Boddaert); Rose ringed Parakeets, *Psittacula krameri* (Scopoli) and House Sparrows, *Passer domesticus* (Linn.). These associations at mixed-communal roosts are noticed throughout the year. The Cattle Egrets, *Bubulcus ibis coromandus* (Boddaert) and Indian Pond Herons, *Ardeloa grayii grayii* (Sykes) also assemble at such mixed roosts only during the non-breeding season while a migratory bird like Rosy Pastor, *Sturnus roseus* (Linn.) roosts together along with the above species for a part of the year. This has also been indicated by Gadgil and Ali¹ (1975) who have given a systematic account of communal roosting of Indian birds.

During the month of June 1976, it was noticed for the first time that the Indian Whitebacked or Bengal Vultures, *Gyps bengalensis* (Gmelin) formed a mixed-communal roost along with the Indian Mynas, House and Jungle Crows and Whitenecked Storks, *Ciconia episcopus* (Boddaert). This mixed congregation was observed on the Poona-Bombay Road near Dapodi, on a Banyan tree, *Ficus bengalensis* L. On counting the number of

birds at this mixed roost, it was found that there were 150 Indian Whitebacked Vultures, 300 Indian Mynas, about 150 House and Jungle Crows and a pair of Whitenecked Stork. These countings were made in the evening, when these birds return to the roost. Further observations showed that this mixed-communal roost was constant till September 1976, both in the number of species and in their total population. Subsequently, the roost totally disappeared till February 1977. In the meantime, the Vultures and Storks seem to have migrated from this locality, while Mynas and Crows shifted to another roost about half a kilometer away from the original roosting place.

From the above observations it would appear that Indian Whitebacked Vultures are seen on this mixed-communal roost only during the monsoon from June—September, which is a part of their non-breeding season.

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NEW PARASITES RECORDED ON THE SORGHUM SHOOTFLY, *ATHERIGONA SOCCATA* (RONDANI)

VARIOUS cultural and chemical control methods have been investigated and recommended for the control of shootfly (*A. soccata*), a serious pest of sorghum. However, very little work has been done on identifying and utilizing the natural enemies of this pest. This aspect is now being systematically investigated under the All India Co-ordinated Sorghum Improvement Project at New Delhi.

One to two week old shootfly infested seedlings, having freshly formed dead hearts, were collected from the field and were kept in separate glass jars containing 5 cm layer of moist sand. The number of dead hearts with the shootfly larvae were counted in each jar to determine the percentage of parasitism. The jars were placed at $27^{\circ}\text{C} \pm 1^{\circ}\text{C}$, the relative humidity ranged between 60 and 70%.

The parasites and shootfly adults emerging in jars were periodically collected and sent to British Museum for identification. It is found that in addition to the two parasites already recorded, viz., *Aprostocetus* sp. and *Callitula bipartitus*

(Kundu *et al.* 1971)¹, the shootfly larvae were also parasitised by *Ganaspis* sp. (Eucoilidae), *Psilus* sp. (Diapriidae), *Hemiptarsenus* sp. (Eulophidae) and *Diaulinopsis* sp. (Eulophidae).

The observation on the percentage of parasitism taken during different periods showed that except for 2% parasitism by *Ganaspis* sp. in the month of April, 1975, these parasites were recorded only in the infested seedlings collected during the months of September and October. Even in these months the extent of parasitism was rather low and ranged from 1 to 4%. The two parasites recorded earlier, viz. *Aprostocetus* sp. and *Callitula bipartitus* were reared out in the month of August also. The percentage parasitism of *Aprostocetus* sp. was found to be higher than any other parasite and ranged from 4% (October) to 15% (September).

Perusal of literature showed that these parasites have been recorded from a number of dipterous hosts from different parts of the world. Kerrich (1962)² reported *Hemiptarsenus semialbiclavus* (Gir.) parasitizing Agromyzid leaf miners of vegetable crops in Africa, while *Psilus* sp. has been recorded as pupal parasite of *Pholeomyia comans* (Diptera: Milichiidae) by Mosev and Neff (1972)³. *Diaulinopsis* sp. was reared from *Agromyza pusilla* Mg. (Diptera: Agromyzidae) from North America, U.S.A. (Thompson 1955)⁴. *Eucoila* (*Ganaspis*) *haywardi* Blanch. has been used for the control of fruit flies, *Anastrepha* spp. (Diptera: Tephritidae) in Argentina (Turica 1968)⁵. The sorghum shootfly (*A. soccata*) has not so far been recorded as host of these parasites and thus constitutes a new host record. These four parasites also constitute first record from India.

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CYANOPHAGE AC-1 INFECTING THE BLUE GREEN ALGA *ANACYSTIS NIDULANS*

AS-1 TYPE cyanophage which infects the unicellular algae, *Anacystis nidulans* and *Synechococcus cedrorum* was first characterized by Safferman *et al.*¹. It is the largest BGA phage so far examined with a head diameter of 90 nm. and tail-head ratio of 3 to 1, based on a tail length of 243.5 nm. It has a rigid tail with a contractile sheath and a base plate with tail pins. In the present report, a new phage type infecting *Anacystis nidulans* 14011 and *Chroococcus minor* ARM was isolated from a waste stabilization pond inside the campus of the Indian Agricultural Research Institute, New Delhi².

The phage formed clear plaques of 4–6 mm after 10 days of incubation. Several blue green algal species of *Nostoc*, *Anabaena*, *Tolypothrix*, *Aulosira* and *Spirulina*, the green alga *Chlorella vulgaris* and the bacteria, *Azotobacter chroococcum*, *Rhizobium* spp. and *Rhodospseudomonas capsulatus* were also tested for susceptibility to this phage, but none of them was found susceptible.

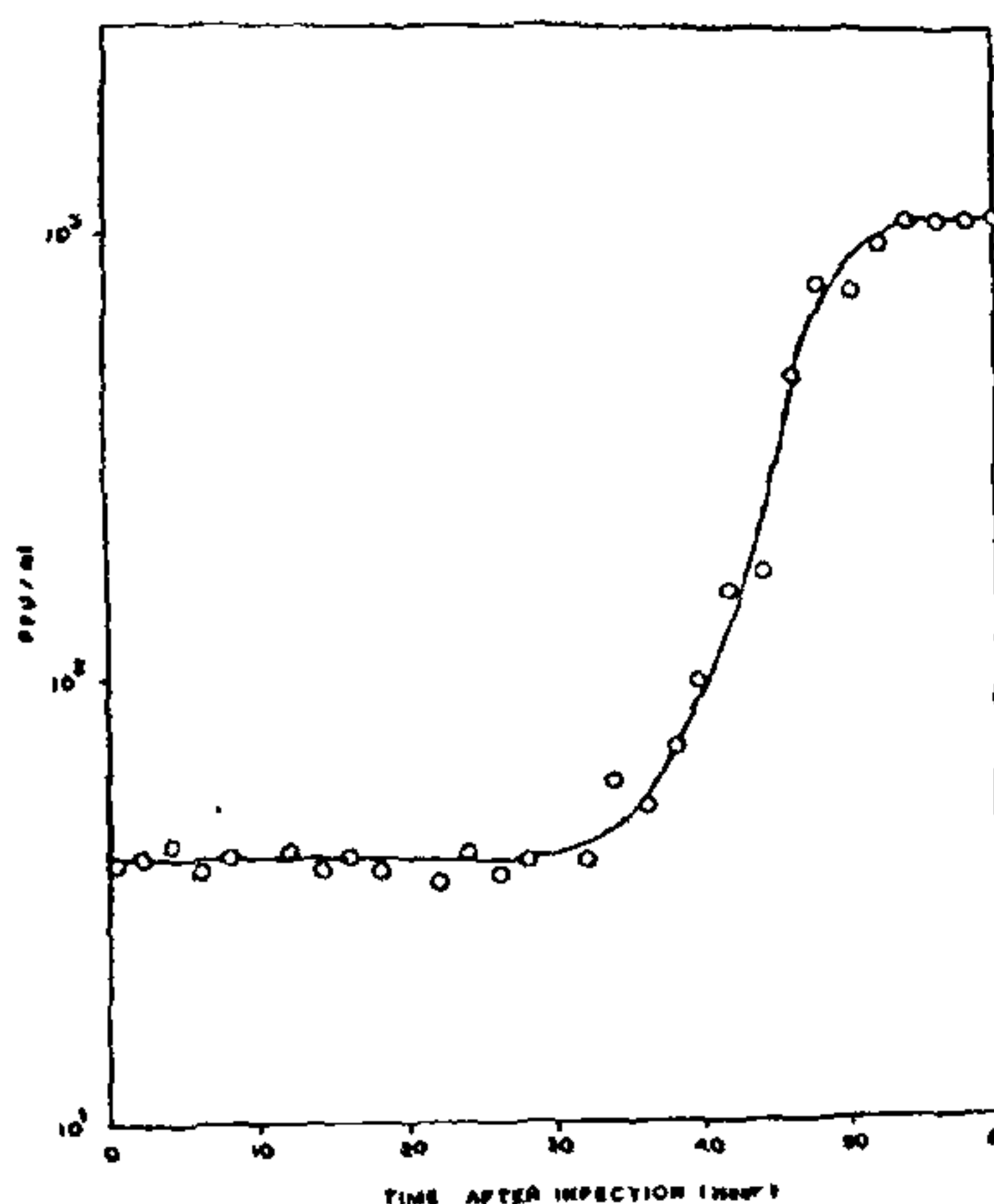


FIG. 1. One step growth curve of AC-1 cyanophage.

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