Parasitism is one of the major health related problems in the companion bird practice and is one of the major clinical problems considered for differential diagnosis, especially in newly acquired birds and in large aviary collections. Hence screening for endoparasites is essential to assess the health status of the birds. In this study, during the year 2010-2012, faecal samples from Captive Psittacine of Major zoos like National Zoological Park, New Delhi, Sri Chamarajendra Zoological Garden, Mysore and Arignar Anna Zoological Park, Vandalur were collected and screened for presence of endoparasites.

Materials and Methods

From National Zoological Park, New Delhi, a total of seven faecal samples were collected from cages of Cockatiel, Scarlet Macaw, Blue Gold Macaw, Military Macaw, Illiger’s Macaw, Grey Macaw and Sulphur Crested Cockatoo. From Sri Chamarajendra Zoological garden, Mysore a total of 42 faecal samples were collected from cages of African Grey Parrot (2 sample), Congo African Gery Parrot (2), Eclectus Parrot (2), Plum Headed Parrot (2), Red Lori (4), Red Collar Lorikeet (2), Rainbow Lorikeet (2), Naday Conure (2), Jandaya Conure (2), Sun Conure (2), Maroon Bellied Conure (2), Patagonian Conure (2), Hans Macaw (2), Blue and Gold Macaw (4), Military macaw (2), Red and Green Macaw (2), Moluccan Cockatoo (2), Sulphur Crested Cockatoo (2) and Goffin’s Cockatoo (2). Similarly, from Arignar Anna Zoological Park, Vandalur twenty three faecal samples were collected from the cages of Rose Ringed Parakeet (2), Alexandrian Parakeet (2), Blossom Headed Parakeet (2), Indian Red Breasted Prakeet (1), Malabar Parakeet (2), Red Winged Parakeet (1), Eclectus Parrot (1), African Grey Parrot (1), Budgerigar (2), Masked Love Bird (1), Red and Green Macaw (1), White Crested Cockatoo (1), Sulphur Crested Cockatoo (1), Grey Cockatiel (2), Jandaya Conure (1) and Sun Conure (1).

Throughout this study droppings of captive Psittacines were collected from their cages in small containers in 10% formalin. For faecal examination, both centrifugal sedimentation technique and floatation technique were used (Soulsby, 1982).

Results and Discussion

The faecal samples from National Zoological Park, New Delhi were negative for endoparasitic infections. From the forty two samples collected from Sri Chamarajendra Zoological Garden, Mysore, one sample (2.38%) of Jandaya Conure, alone was positive for Strongyloides sp. (Fig 3). From the twenty three samples collected from Arignar Anna Zoological Park, Vandalur, fourteen samples (60.87%) revealed mixed infection comprising the eggs of Capillaria sp. (Fig 1), Ascaridia sp. (Fig 2), and Strongyles (Fig 4 and 5). Further, 26.09% (n=6) of the samples revealed evidences of Capillaria sp. and 13.04% (n=3) of the samples revealed evidences of Ascaridia sp.

Encountering of Ascarids along with other endoparasites, in case of Cockatoos under study is in accordance with the earlier report furnished by Greve (1996) who opined that ascarid infection was common in aviary Cockatoos. Also, Tully et al. (2000) opined that especially in group of parakeets, round worms were the commonest cause of death. The findings of Capillaria sp. eggs in many species of the Psittacine group of birds under investigation is
in accordance with the findings of Kajerova and Barus (2005) who stated that the occurrence of Capillarid eggs in coprological examinations of Psittacine birds in captivity is relatively frequent. Among the Psittacine groups of birds studied at Arignar Anna Zoological Park, Vandalur, eggs of strongyles were encountered mainly as mixed infections along with Ascaridia sp. and Caillaria sp. In this regard, Papini et al. (2012) opined that during a survey in 63 pet birds and 83 Zoo birds, strongyles were encountered at the rate of 5.5 per cent. Mixed infections with Ascaridia sp., Capillaria sp. and strongyles as encountered in parakeets, macaw, cockatoo and cockatiels at Arignar Anna Zoological Park indirectly indicated clinical interventions subsequent to the detailed and periodical investigations of faecal samples. Viney and Lok (2007) quoted that Strongyloides was the genus containing about 50 species of gastrointestinal parasites of vertebrates, infection birds, in addition to mammals, reptiles and amphibians. The reason for the evidence of higher incidence of mixed infections in Arignar Anna Zoological Park, might be attributed to the differences in the climatic zones including weather and humidity related factors and nutritional factors in addition to biological preferences, attributes and less number of samples studied.

The findings made in this study indicated the necessity of introduction of parasitological prophylactic programmes especially in the high valued Psittacine group of birds. However, it warrants more detailed research programmes pertaining to different medicaments that are preferred for the anthelmintic treatment.

References