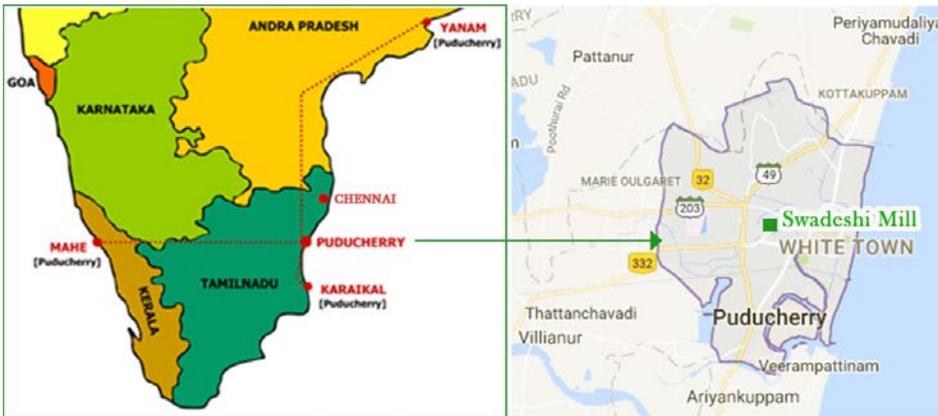


INDIAN BARN OWL

Diet of *Tyto alba* determined from Pellet analysis in Puducherry with some notes concerning co-habitation with the False Vampire Bat *Megaderma lyra*



Swadeshi Mill Campus, Puducherry



IUCN Red List:
Global – Least Concern (Scopoli, 1769)

Aves
[Class of Birds]

Strigiformes
[Order of owls]

Tytonidae
[Family of Barn-owls]

Tyto alba
[Indian Barn-owl]

Species described by Scopoli in 1769

Location and layout of Swadeshi Mills campus. Note the forested area completely surrounded by human habitations

The Barn Owl *Tyto alba* is widely distributed over most of the Old World (Konig & Weick 2008; Mikkola 2012) and until quite recently considered to be almost circumpolar in distribution (Duncan 2003). In recent times there has been a marked shift in taxonomical reclassification and some taxa earlier considered subspecies of *T. alba* have undergone taxonomic revisions and have been given full species status – for e.g. the American Barn Owl *Tyto furcata* and Andaman Barn Owl *Tyto deroepstoroffi* (Konig & Weick 2008;

Mikkola 2012; Rasmussen & Anderton 2012). The Indian Barn Owl *Tyto alba stertens* however retains its subspecies status (Konig & Weick 2008; Mikkola 2012) and, in relation to most other owls, its diet has been comparatively well documented in South Asia (e.g. Ali & Santhanakrishnan 2012; Mahmood-ul-Hassan et al. 2007a,b; Mushtaq-ul-Hassan et al. 2004; Nadeem et al. 2012; Neelananarayanan 2007; Pande & Dahunakar 2012; Santhanakrishnan 1987, 1995; Santhanakrishnan et al. 2010), but all these studies



Various shapes and sizes of owl pellets collected at the site

concerned rural and urban environments. Globally, the prey base of *T. alba* is closely associated with anthropogenic influence and, in undisturbed areas, grassland regions (Alvizatos & Gountner 1999; Bose & Guidali 2001; Charter et al. 2007; Georgiev 2005; Glue 1967; Leonardi & Arte 2006; Love et al. 2000; Marti et al. 1979; Pezzo & Morimando 1995) literature reveals that little is known about its food spectrum in densely

forested tracts of land. This attempt is an effort to unravel the prey base in a naturally occurring dense forested tract of land with some built up structures (disused buildings) and some open spaces within the heart of a densely populated city along the south-east coast of India.

Methods

Study area: Swadeshi Mills (also known as Anglo French Textiles) is a natural forested area which covers 23 acres (11°92'N & 79°81'E) in the heart of Puducherry (formerly Pondicherry). It has 183 species of plants, of which 62 are tree species, 37 shrubs, 27 climbers and 57 herbs which is a very high level of diversity for a forest of this size (Anon. 2011). The forest type native to the Coromandel Coast has been variously described as the 'tropical dry evergreen forest' (Champion & Seth 1968), '*Albizia amara* – *Acacia* Boiv. Community' (Meher-Homji 1973; Puri et al. 1989) and 'East Deccan dry evergreen forest'

<www.worldwildlife.org/ecoregions/im0204>. Whatever term one prefers to use, it remains a highly endangered forest type which historically existed only as a narrow belt along the east coast of India from Vishakapatnam to Point Calimere (Blasco & Legris 1972) which has been systematically felled over most of its range – in fact it has been estimated that only 4% of the original forest cover remains and its status was assessed as critical (Wikramanayake et al. 2002).

Global Distribution:
Afghanistan;
Bangladesh; Cambodia;
China; India; Lao
People's Democratic
Republic; Malaysia;
Myanmar; Nepal;
Pakistan; Sri Lanka;
Thailand; Viet Nam

Very few whole pellets but mainly disintegrated pellet remains were received by us in December 2016 from a loft in a disused building in Swadeshi Mills in which old lumber and furniture is stored. A site visit confirmed the presence of two adult and two young *Tyto alba* and the Indian false vampire bat *Megaderma lyra* also occupying the same building and further examination of the premises did not disclose any prey remains. Though a single *M. lyra* was found dead on the ground, it was not considered for analysis as it was fresh and no part of it was consumed. Verbal inquiry disclosed the fact that both species inhabit the

Table 1. The prey of *Tyto alba stertens* from a forested area in Puducherry city

Sno	Prey	Abundance (n)	% Abundance (n %)	Estimated biomass/item (g)	Estimated total biomass (g %)	% Estimated biomass (g %)	Category
1	<i>Suncus murinus</i>	16	10.25	41.7	667.2	11.10	CF
2	<i>Megaderma lyra</i>	10	6.41	10.9	109.0	1.81	SF
3	<i>Rattus rattus</i>	24	15.38	169.6	4070.4	67.75	BF
4	<i>Bandicota bengalensis</i>	3	1.92	276.4	829.2	13.80	CF
5	<i>Mus</i> spp.	11	7.05	19.3	212.3	3.53	SF
6	<i>Hemidactylus</i> spp.	18	11.53	0.13	2.34	0.03	OF
7	<i>Anura</i>	7	4.48	16.1	112.7	1.87	SF
8	<i>Hottentotta tamulus</i>	6	3.84	0.02	0.12	0.001	OF
9	<i>Heterometrus swammerdami</i>	2	1.28	0.11	0.22	0.003	OF
10	<i>Scolopendra</i> spp.	43	27.56	0.06	2.58	0.04	OF
11	<i>Coleoptera</i>	16	10.25	0.09	1.44	0.02	OF

BF: Basic food (>20%); CF: Constant food (5-20%); SF: Supplementary food (1-5 %); OF: Occasional food (< / %)

same roosting site and both regularly breed here – the bats from the rafters and the owls in a loft, and it is the practice of the caretakers to clean out the place every year to salvage any reusable material.

Both whole pellets and pellet remains were subjected to analysis as this method has been proven to be fundamental way of determining the prey spectrum of owls (Errington 1930, 1932; Fischter 1941). The NaOH treatment procedure as recommended by Schueler (1972) was followed to separate bones and chitinous arthropod remains as “... the bones of owl pellets have traditionally been recovered by manual sorting, they can be recovered easier from large collections of pellets by gently breaking the pellets by hand and boiling the pieces in a 3% aqueous solution of NaOH ... Several washings in water will clean the bones, which are left in excellent condition for identification”. Specific identification of vertebrates was dependent upon established literature (Neelananarayanan et al. 1998; Talmale & Pradhan 2009; Ramanujam 2004) as well consultation with our reference collection. Invertebrate identification was undertaken by an Entomologist quite conversant with arthropods of this region (Verzhutskii pers. comm.). Specific identification was possible only for most mammal species, though the *Mus* species complex remains an enigma to date in spite of valuable work undertaken by Marshall (1977, 1986) and Agrawal (2000) too mentions that “many anomalies exist and taxonomical details still remained unresolved”. Hence all mice were grouped under their generic classification.

Until quite recently some investigators of raptor food habit studies have reported numerical percentages of occurrence of prey categories and we too have been guilty of the same earlier concerning the Indian scops owl *Otus bakkamoena* and spotted owl *Athene brama* (Verzhutstii & Ramanujam 2002; Ramanujam & Verzhutskii 2004a). Although



Pellet remains gathered at the site - some mammal bones are visible

this method may provide information concerning relative impact a raptor has upon a prey species, biomass determination is bound to give a more accurate evaluation of relative importance of prey consumed since it impacts on nutritional value of food ingested and this method was adopted to derive a category of food intake based on percentage values put in place by Kumar (1985) and considered to be the benchmark value for prey parameters for classification of biomass ingested and thereafter used to categorize the diet of other owl species – e.g. the Indian eagle owl *Bubo bengalensis* (Ramanujam 2006). This



Roosting false vampire bats *Megaderma lyra* and skeletal remains recovered from pellet remains

classification recognizes four categories of food: Basic food (BF) – prey occurring with a frequency of >20%, Constant food (CF) – prey occurring with a frequency between 5 and 20%, Supplementary food (SF) – prey occurring with a frequency between one and five percent and Occasional food (OF) – prey occurring with a frequency below one percent. Wet biomass of non-volant small mammals was estimated as the average weight of 25 animals trapped in this region and weighed on earlier studies concerning the prey spectrum of the Indian eagle owl *Bubo bengalensis* (Ramanujam 2006, 2015; Ramanujam & Singh 2017). The biomass of *M. lyra* was estimated as the weight of the single specimen found dead within the roosting site. Biomass of others was determined by randomly collecting 10 specimens belonging to each group from the nearby Puducherry Botanical Garden (since we were not allowed to trap at site) and weighing each specimen before release and thereafter estimating their average weight.

Nevertheless, the absolute

validity of inferring prey spectrums based only on one method of analysis has to be considered objectively since pellet analysis alone has shown to be inadequate in dealing with a holistic picture concerning biomass ingested by owls. Recent findings suggest that multiple methods may yield a more conclusive picture concerning the prey of owls and nutritional values associated with them – viz. direct observation of prey delivery and recovery of prey remains (Marchesi & Pedrini 2002; Rosenberg & Cooper 1990; Simmons et. al. 1991) and these methods have proven to be beneficial to earlier endeavours concerning the Indian eagle owl *Bubo bengalensis* (Ramanujam 2006, 2015). Nevertheless, in this instance, and since we did not have access to the nesting area during the breeding season, it was left to us to infer values based only on data collected in the nesting / roosting area and relying entirely on pellets, which may result in a bias but we are convinced that the bias is minor and it still gives us data concerning the prey of *T. alba* in a well wooded environment which is a fundamental need of the hour so that prey spectrums of owls in different habitats can be assessed in the not too distant future.

Results

A total of 156 prey were identified in the diet of *T. alba*. Mammals dominated and accounted for 97.99% of which murid rodents accounted for 85%. Of these 24 tree or house rats *Rattus rattus* were ingested accounting for 67.75% biomass, followed by the lesser bandicoot *Bandicota bengalensis* with 13.8% and mice *Mus* spp. for 3.53%. Though only three *B. bengalensis* were consumed they accounted for a greater biomass than 11 *Mus* spp. The musk shrew *Suncus murinus* accounted for 11.1% and 16 were consumed. Eighteen geckos *Hemidactylus* spp. were consumed accounting for just 0.03% biomass. Frogs (Anura) accounted for a biomass of 1.87%. Two species of scorpions were predated upon – *Hottentotta tumulus* and *Heterometrus swammerdami* accounting for a combined biomass of 0.004%. Though Centipedes *Scolopendra* spp. were numerically superior than all other prey (43 nos.) their percentage of biomass was negligible – a paltry 0.04%. Sixteen beetles (Coleoptera) accounted for 0.02% biomass. Overall arthropods accounted for a biomass of only 0.06%. Basic food (>20%) was *Rattus rattus*, Constant food (5–20%) comprised of *Suncus murinus* and *Bandicota bengalensis*, Supplementary food (1–5%) consisted of *Megaderma lyra*, *Mus* spp. and Anura, and Occasional food (< 1%) was *Hemidactylus* spp., *Hottentotta tumulus*, *Heterometrus swammerdami*, *Scolopendra* spp. and Coleoptera. For further details refer Table 1.

Discussion

That rodents dominated the prey spectrum is not surprising as throughout its range *T. alba* has been known as a predator of rodents (e.g. Alivizatos & Gountner 1999; Bellocq 2000; Charter et al. 2007; Debrot et al. 2001; Georgiev 2005; Glue 1967; Leonardi & Arte 2006; Love et al. 2000; Pezo & Morimando 1995). Bats as part of the diet of *T. alba* has been reported earlier (e.g. Sommer et al. 2005) but this is the first instance I know of *M. lyra* in the owl's diet. The reason for such predation could be that since the bat occurs in fair numbers at the same roosting site the owls are attracted to them. Another reason could be intraguild aggression wherein a larger predator kills and consumes a smaller one since both occupy the same habitat and compete for the same resources – akin to mammalian carnivores and raptors (Jankowiak & Tryjanowski 2013), *T. alba* and Little Owl *Athene noctua* (Martinez et. al. 2008) and even early humans and carnivores (Mondini 2002). There is quite a degree of prey overlap between *T. alba* and *M. lyra* and in this region *M. lyra* has been known to predate on *Suncus murinus*, other *M. lyra*, rodents, *Hemidactylus* spp. and Anura (Ramanujam & Verzhutskii 2004b). Hence there is bound to be competition for space and resources, and the owl being larger than the bat it is bound to get the upper hand. It would be interesting to note the effect the bats have on owl chicks when they are at the vulnerable stage after hatching and this awaits further enquiry.

Here we have elucidated the prey spectrum of *T. alba* in a 23 acre forested site.

Nevertheless, we assume that the owls hunt in the forest but it could also be possible that the owls make forays into human habitations as the site itself has offices and some residences and the surrounding area is heavily urbanized (as can be evidenced from Image 1). In such an instance it could be possible that the owls also take prey from these areas. This is a distinct possibility since *T. alba* is known to travel 1.6 to 3.2km. from its roost to hunt and its home range size is about 4.34Km² (Devkar 2009). Only radio tracking can determine the home ranges owls occupy in this forested tract. Also to be elucidated is the population of *T. alba* in this area. It is only further research that could shed light on populations, home ranges and ranging behaviour which could be illuminating for an apex predator and the results could benefit development practices in this pocket of wilderness within a city.

Owl hunt in the forest but it could also be possible that the owls make forays into human. This is a distinct possibility since *T. alba* is known to travel 1.6-3.2 km from its roost to hunt and its home range size is about 4.34km²

References

- Agrawal, V.C. (2000).** Taxonomic studies on Indian Muridae and Hystricidae (Mammalia: Rodentia). *Records of the Zoological Survey of India*, Miscellaneous Publication, Occasional Paper No. 180: 177pp.
- Ali, A.M.S. & R. Santhanakrishnan (2012).** Diet Composition of the Barn Owl *Tyto alba* (Aves: Tytonidae) and Spotted Owlet *Athene brama* (Aves: Strigidae) Coexisting in an Urban Environment. *Podoces* 7: 21 – 32.
- Alvizatos, H. & V. Gountner (1999).** Winter diet of the Barn Owl (*Tyto alba*) and Long-eared Owl (*Asio otus*) on northeastern Greece. *Belgian Journal of Zoology* 135: 109–118.
- Anon (2011).** Detailed Project Plan for the development of Urban Forest at Swadeshi Mills site for the Puducherry Department of Tourism. Auroville Design Consultants / Auroville Botanical Services. 42pp.
- Belloccq, M.I. (2000).** A review of trophic ecology of the Barn Owl in Argentina. *Journal of Raptor Research* 34: 108–119.
- Blasco, F. & P. Legris (1972).** Dry Evergreen Forest of Point Calimere and Marakanam. *Journal of the Bombay Natural History Society* 70: 279–294.
- Bose, M. & F. Guidali (2001).** Seasonal and geographic differences in the diet of the Barn Owl in an agro-ecosystem in Northern Italy. *Journal of Raptor Research* 35: 240–246.
- Champion, H.G. & V.K. Seth (1968).** *A Revised Survey of the Forest Types of India*. 404pp. + 103pl.
- Charter, M., I. Izhaki, L. Shapira & Y. Leshem (2007).** Diets of urban breeding Barn Owls (*Tyto alba*) in Tel Aviv, Israel. *Wilson Journal of Ornithology* 119: 484–485.
- Debrot, A.O., J.A. deFreitas, A. Brouwer & M. vanMarwijk Kooy (2001).** Curaco Barn Owl: status and diet, 1987 – 1989. *Caribbean Journal of Science* 37: 185 – 193.
- Devkar, R.V. (2009).** Episodes of unnatural injury and death of Barn Owls (*Tyto alba*): a warning call. *Current Science* 96: 209–210.
- Duncan, J.R. (2003).** *Owls of the World: Their Lives, Behavior and Survival*. Firefly Books (U.S.) Inc. 319pp.
- Errington, P.L. (1930).** The pellet analysis method of raptor food habits study. *Condor* 32: 292–296.
- Errington, P.L. (1932).** Technique of raptor food habits study. *Condor* 34: 75–86.
- Fischter, E. (1941).** The role of pellet analysis in faunistics. *Nebraska Bird Review* 9: 26–30.
- Georgiev D.G. (2005).** Food niche of *Athene noctua* (Scopoli, 1769) and *Tyto alba* (Scopoli, 1769) (Aves: Strigiformes) coexisting in one region of the upper Tracian Valley (South Bulgaria). *Animalia* 41: 115–122.
- Glue, D.E. (1967).** Prey taken by the barn owl in England and Wales. *Bird Study* 14: 169–183.
- Jankowiak, M. & P. Tryjanowski (2013).** Cooccurrence and food niche overlap of two common predators (red fox *Vulpes vulpes* and common buzzard *Buteo buteo*) in an agricultural landscape. *Turkish Journal of Zoology* 37: 157–162.
- Konig, C. & F. Weick (2008).** *Owls of the World*. 2nd Edition. Christopher Helm, London. 528pp.
- Kumar, T.S. (1985).** *The Life History of the Spotted Owlet (Athene brama brama, Temminck) in Andhra Pradesh*. Monograph of the Raptor Research Centre, Hyderabad, India. 241pp.
- Leonardi, G. & G.L.D. Arte (2006).** Food habits of the Barn Owl (*Tyto alba*) in a steppe area of Tunisia. *Journal of Arid Environment* 65: 677–681.
- Love, R.A., C. Webon, D.E. Glue & S. Harris (2000).** Change in the food of the British barn owls. *Mammal Review* 30: 107–129.
- Mahmood-ul-Hassan, M., M.A. Beg & M. Mushtaq-ul-Hassan (2007a).** Locally related changes in the diet of the Barn Owl (*Tyto alba stertens*) in agroecosystem in Central Punjab, Pakistan. *Wilson Journal of Ornithology* 119: 479–483.
- Mahmood-ul-Hassan, M., M.A. Beg & H. Ali (2007b).** Seasonal variation in the diet of the barn owl *Tyto alba stertens* in central Punjab, Pakistan. *Acta Zoologica Sinica* 53: 431–436.
- Marchesi, L. & P. Pedrini (2002).** Biases associated with diet study methods in the Eurasian Eagle Owl. *Journal of Raptor Research* 36: 11–16.
- Marshall, J.T. Jr. (1977).** A synopsis of Asian species of *Mus* (Rodentia: Muridae). *Bulletin of the American Museum of Natural History* 158: 173–220.
- Marshall, J.T. Jr. (1986).** Systematics of the Genus *Mus*. *The Wild Mouse in Immunology: Current Topics in Microbiology and Immunology* 127: 12–18.
- Marti, C.D., P.W. Wager & K.W. Denne (1979).** Nest boxes for the management of barn owls. *Wildlife Society Bulletin* 7: 145–148.
- Martinez, J.E., J.A. Martinez, I. Zuberogoitia, J. Zabala, S.M. Redpath & J.F. Calvo (2008).** The effects of intra- and interspecific interactions on the large scale distribution of cliff-nesting raptors. *Ornis Fennica* 85: 13–21.
- Meher-Homji, V.M. (1973).** A phytosociological study of the *Albizia amara* Boiv. Community in India. *Phytocoenologia* 1: 115–129.
- Mikkola, H. (2012).** *Owls of the World – A Photographic Guide*. Firefly Books. 512pp.
- Mondini, M. (2002).** Carnivore Taphonomy and Early Human Occupations in the Andes. *Journal of Archaeological Science* 29: 791–801.
- Mustaq-ul-Hassan, M., M.N. Raza, B. Shahzadi & A. Ali (2004).** The diet of Barn Owl from canal bank, canal rest house and graveyard of Gogra. *Journal of Research (Science)* 15: 291 – 296.
- Nadeem, M.S., S.M.K. Imran, T. Mahmood, A.R. Kayani & S.I. Shah (2012).** A comparative study of the diets of Barn Owl (*Tyto alba*) and Spotted Owlet (*Athene brama*) inhabiting Ahmadpur East, Southern Punjab, Pakistan. *Animal Biology* 62: 13–28.
- Neelanarayanan, P. (2007).** Diet of Barn Owl *Tyto alba stertens* Hartert (1929) in a portion of Cauvery delta, Tamil Nadu, India. *Zoos' Print Journal* 22: 2777–2781.
- Neelanarayanan, P., R. Nagarajan & R. Kanakasabai (1998).** Studying diet of Barn Owl *Tyto alba stertens* by pellet

- analysis (pp. 125–131). In: *Birds in Agricultural Ecosystem*. Society for Applied Ornithology. 196pp.
- Pande, S. & N. Dahanukar (2012)**. Reversed Sexual Dimorphism and Differential Prey Delivery in Barn Owls (*Tyto alba*). *Journal of Raptor Research* 46: 184–189.
- Pezzo, F. & F. Morimando (1995)**. Food habits of the Barn Owl, *Tyto alba*, in a Mediterranean rural area: Comparison with the diet of two sympatric carnivores. *Bolletino di zoologia (Italian Journal of Zoology)* 62: 369–373.
- Puri, G.S., R.K. Gupta, V.M. Meher-Homji & S. Puri (1989)**. *Forest Ecology. Vol. 2: Plant form, diversity, communities and succession*. Oxford & IBH Publishing Co Pvt Ltd. 582pp. + 36pl.
- Ramanujam, M.E. (2004)**. Methods of analyzing rodent prey of the Indian Eagle Owl *Bubo bengalensis* (Franklin) in and around Pondicherry, India. *Zoos' Print Journal* 19: 1492–1494.
- Ramanujam, M.E. (2006)**. On the prey of the Indian Eagle Owl *Bubo bengalensis* (Franklin, 1831) in and around Pondicherry, southern India. *Zoos' Print Journal* 21: 2231–2240.
- Ramanujam, M.E. (2015)**. The time budget and behavioural traits of young and adult Indian Eagle Owl *Bubo bengalensis* (Franklin, 1831) (Aves: Strigiformes: Strigidae) in and around a nesting site: a preliminary report. *Journal of Threatened Taxa* 7: 8139–8147.
- Ramanujam, M.E. & B. Verzhutskii (2004a)**. On the prey of the Spotted Owlet *Athene brama* (Temminck) in a forested ravine in Auroville. *Zoos' Print Journal* 19: 1654–1655.
- Ramanujam, M.E. & B. Verzhutskii (2004b)**. The prey of the Greater False Vampire Bat *Megaderma lyra* E. Geoffroy at Kaliveli, Tamil Nadu. *Zoos' Print Journal* 19: 1655–1656.
- Ramanujam, M.E. & T. Singh (2017)**. A comparative study of the diet of the Indian Eagle Owl *Bubo bengalensis* (Franklin, 1831) from two distinct habitats in the Tamil Nadu - Puducherry area, southern India. *Journal of Threatened Taxa* 9(3): 9892–9902; <http://doi.org/10.11609/jott.2438.9.39892-9902>
- Rasmussen, P.C. & J.C. Anderton (2012)**. *Birds of South Asia: The Ripley Guide*. Second Edition. Vol. 1 & 2. Natural Museum of Natural History – Smithsonian Institution, Michigan State University and Lynx editions, Washington D.C., Michigan and Barcelona. 378pp. & 504pp.
- Rosenberg, L.V. & R.J. Cooper (1990)**. Approaches to avian diet analysis. *Avian Biology* 13: 80–90.
- Santhanakrishnan, R. (1987)**. Studies on population, food habits and nesting of Barn Owl, *Tyto alba* (Scopoli) in a portion of Cauvery river basin. M.Phil. Thesis, Bharathidasan University, Trichy, India.
- Santhanakrishnan, R. (1995)**. Ecology of the Barn Owl, *Tyto alba* (Scopoli) with special reference to population, feeding and breeding in Mayiladuthurai, Tamil Nadu, South India. Ph.D. Thesis, Bharathidasan University, Trichy, India.
- Santhanakrishnan, R., A.M.S. Ali & U. Anbarasan (2010)**. Diet Variations in the Barn Owl *Tyto alba* (Scopoli, 1769) in Madurai District, Tamil Nadu, Southern India. *Podoces* 5: 95–103.
- Schueler, F.W. (1972)**. A new method of preparing owl pellets: Boiling in NaOH. *Bird Banding* 43: 142.
- Simmons, R.E., D.M. Avery & G. Avery (1991)**. Biases in diets determined from pellets and remains: correction factors for mammal and bird-eating raptors. *Journal of Raptor Research* 26: 63–67.
- Sommer, R., H. Zoller, D. Kock, W. Bohme & A. Griesau (2005)**. Feeding of the barn owl, *Tyto alba* with first record of the European free-tailed bat, *Tadarida teniotis* on the island of Ibiza (Spain, Balearics). *Folia Zoologica* 54: 364–370.
- Talmale, S.S. & M.S. Pradhan (2009)**. Identification of some Small Mammal species through Owl Pellet Analysis. *Records of the Zoological Survey of India*, Occasional Paper No. 294: 23pp. + 20pl.
- Verzhutskii, B. & M.E. Ramanujam (2002)**. On the prey of the Collared Scops Owl (*Otus bakkamoena* (Pennant)) at Auroville, Pondicherry. *Zoos' Print Journal* 17: 939–940.
- Wikramanayake, E., E. Dinerstein & C.J. Loucks (2002)**. *Terrestrial Ecosystems of the Indo-Pacific – A Conservation Assessment*. Island Press, Washington DC. 824pp.

Acknowledgements

I wish to thank the contributor who gathered the pellets and pellet remains and gave them to us. Thanks are also due to M. Bubesh Guptha and P. Karunakaran for helping me manifest this manuscript.

M. Eric Ramanujam

Principal Investigator (Faunistics), Pitchandikulam Bioresource Centre / Pitchandikulam Forest Consultants, Auroville, Tamil Nadu 605 101. Email: ericramanujamowl@yahoo.com

Citation: Ramanujam, M.E. (2017). Indian Barn Owl: Diet of *Tyto alba* determined from Pellet analysis in Puducherry with some notes concerning co-habitation with the False Vampire Bat *Megaderma lyra*. Bird-o-soar#1, In: *Zoo's Print* 32(6): 14:22