

Hypothyroidism in India

This has reference to the article 'Study of prevalence of hypothyroidism in women of reproductive age in Meghalaya, North-Eastern India' by I. J. Kharkongor and B. B. P. Gupta (*Curr. Sci.*, 1998, 75, 1390-1393) and the Correspondence 'Hypothyroidism' by B. B. P. Gupta (*Curr. Sci.*, 1999, 77, 628). Explanation given by Gupta to query (3) in the Correspondence regarding diagnosis of hypothyroidism is not satisfactory. In primary hypothyroidism, the most important diagnostic test is TSH measurement¹. Based on my own experience of analysing a large number of samples for thyroid hormones, conclusions arrived at by the authors are not beyond doubt.

Low serum total T₄ alone is not sufficient for classification of patients as hypothyroid. A significant increase in the serum TSH concentration, beyond normal range, is required in all cases of primary hypothyroidism, irrespective of T₄ concentration. This is true even in case of subclinical hypothyroidism¹. This has not been the case with the two reported patients, as TSH is less than 6 µIU/ml. They may have to do further investigations and clinical studies to rule out relatively rare instances of secondary hypothyroidism in these two 'hypothyroid' patients.

It is misleading to make any conclusion on the basis of a small number of samples in each subgroup (less than 30). This is particularly so, when all of their conclusions are based on only one sample being 'hypothyroid' in each of the pregnant and non-pregnant groups. Detection of hypothyroidism in women of reproductive age group is very important, as maternal hypothyroid state may adversely affect the foetus even when thyroid deficiency occurs during the first trimester².

1. Ridgway, E. C., *Clin. Chem.*, 1996, 42, 179-182.
2. James, E. H. *et al.*, *N. Engl. J. Med.*, 1999, 341, 549-555.

V. BHUPAL

*Regional Centre for Radiopharmaceuticals,
BRIT/DAE, KMIO Campus,
Hosur Road,
Bangalore 560 029, India*

Response

We are thankful to V. Bhupal for his interest in the prevalence of hypothy-

roidism in India. We wish to mention that Bhupal has not raised any new point regarding our article. We have already expressed our opinion regarding the size of samples and TSH levels in our earlier response to the points raised by G. R. Sridhar (*Curr. Sci.*, 1999, 77, 628). We have not made any comment on the nature (primary/secondary) of hypothyroidism. Further, we have already mentioned that in areas of less severe iodine deficiency, endemic goitre is associated with normal TSH levels. We appreciate the experience of Bhupal in handling a large number of routine blood samples for thyroid hormones. We fully agree with his genuine concerns about the ill-effects of hypothyroidism during pregnancy. We insist that our data have clearly indicated the prevalence of hypothyroidism in women of Meghalaya. We have already suggested in our article the need to undertake a study of goitre on a larger sample size. It is up to the scientific community and funding agencies to undertake such a study.

B. B. P. GUPTA

*Department of Zoology,
North-Eastern Hill University,
Shillong 793 022, India*

Lesser dog-faced fruit bat

I was pleased to read the letter by R. K. Varshney (*Curr. Sci.*, 1999, 77, 734-735) in response to the article 'Occurrence of *Cynopterus brachyotis* (Chiroptera: Pteropodidae) in Kalakad Mundathurai Tiger Reserve, Southern India' (*Curr. Sci.*, 1999, 76, 1542).

To begin with the distributional status of the lesser dog-faced fruit bat *Cynopterus brachyotis* (Muller), the author reports its distribution in Southern India. However, Sinha¹ has recorded its presence in Nagaland. It is also found in Assam, Bihar and West Bengal².

I was taken aback when the author reported 110 species of bats occurring

in the Indian sub-continent. In a recent book by Bates and Harrison³, 119 species from 37 genera and 8 families were reported.

Further, the author has surveyed only information published by the Zoological Survey of India. It would be apt if he had seen the recent issue of *Zoos' Print*⁴, published by Sally Walker and her group from Coimbatore, who have compiled a list of bat species present in India and South-east Asia. The present status consists of 21 species as suggested threatened by various bat biologists in a recent forum conducted by the above organization.

1. Sinha, Y. P., *Geobios News Rep.*, 1995, 14, 148.
2. Chakraborty and Sen, *Rec. Zool. Surv. India*, 1999, 88, 263-285.
3. Bates, Paul J. I. and Harrison, David L., *Bats of Indian Sub-continent*, Harrison Zoological Museum Press, 1997.
4. Walker, Sally, *Zoos' Print*, 1999, 1-14, 1-20.

RIKI KRISHNAN

*1st Stage, 1st Main Road,
A.E.C.S. Layout,
Sanjaynagar,
Bangalore 560 094, India*

Response

Balasingh *et al.*¹ reported *Cynopterus brachyotis*, for the first time, from a Tiger Reserve area in Tamil Nadu. They stated it to be a little known and a very poorly studied species of the Indian sub-continent, reported from a few pockets only in Southern India. However, in my letter² I pointed out certain facts/observations: (1) *C. brachyotis* widely occurs in Southern India (Andhra Pradesh, Karnataka, Tamil Nadu and Kerala), besides Goa (see refs 4 and 5 in Varshney²). In addition, this species is well-represented in South and South-east Asia (as reported too by Balasingh *et al.*¹). (2) Its South Indian and Sri Lankan population has a subspecies *ceylonensis*, which is distinct and well distinguished from the other Indian species *sphinx sphinx*. (3) The Indian bat population has been extensively studied. (4) None of the Indian species of bats is rare or endangered.

Balasingh³, in his response to my letter agreed that they do not claim that their bat specimens from the Tiger Reserve were rare species. They also clarified that their specimens show characteristic features of *ceylonensis*.

Krishnan in the above letter has however raised some concerns about my observations on the distribution status of this Indian bat species². Let me remind that *C. brachyotis* (Mueller) is a widely distributed species. Sinha (see ref. 1 in Krishnan's letter), and Chakraborty and

Sen (see ref. 2 in Krishnan's letter) might have reported the occurrence of *C. b. sphinx* which is another subspecies of *brachyotis*, currently treated as a separate species. This *sphinx* is one of the most common bats of eastern India, occurring widely in Pakistan, mainland of India, Nepal, Bangladesh, Sri Lanka, etc⁴.

Moreover, one need not be taken aback about the number of taxa in any group of animals or plants, which keeps changing on subsequent studies and according to the status given by different workers. Synonymy, homonymy, discovery of new species, and change of category from subspecies to species or vice versa, cause such changes in number. It is possible that in the book by Bates and Harrison (see ref. 3 in Krishnan's letter) some subspecies of Indian bats have been raised to species level, due to which the total number varies from 110 to 119.

As for example, I have already cited *sphinx*, which some authors treat as subspecies of *brachyotis* and some others as a separate species. Agrawal⁵ has synonymized *C. s. gangeticus* with *C. s. sphinx*. Another species *C. angulatus* is treated as a subspecies of *C. brachyotis* by Ellerman and Morrison Scott⁶.

Since the Zoological Survey of India has been exclusively studying the taxonomy and distribution of Indian fauna for the last 85 years, I thought it appropriate to rely more on its publications. Their findings are based on field work and examination of actual specimens, while

the *Zoos' Print* list quoted by Krishnan (see ref. 4 in Krishnan's letter), is merely a compilation, probably out of a single seminar! Shall we devalue actual studies in favour of quick-done compilations? As far as 21 species suggested as threatened by the Zoo Outreach Organization, I can only assert that so far neither the CITES nor the Indian Board for Wild Life have declared any species of Indian bats as threatened.

1. Balasingh, J., Ronald, J., Thiruchenthil Nathan, P. and Suthakar Isaac, S., *Curr. Sci.*, 1999, **76**, 1542.
2. Varshney, R. K., *Curr. Sci.*, 1999, **77**, 734.
3. Balasingh, J., *Curr. Sci.*, 1999, **77**, 734-735.
4. Agrawal, V. C., Das, P. K., Chakraborty, S., Ghose, R. K., Mandal, A. K., Chakraborty, T. K., Poddar, A. K., Lal, J. P., Bhattacharyya, T. P. and Ghosh, M. K., *Fauna of West Bengal*, Part 1, 1992, pp. 27-169.
5. Agrawal, V. C., *Rec. Zool. Surv. India*, 1973, **67**, 261-280.
6. Ellerman, J. R. and Morrison-Scott, T. C. S., *Checklist of Palaearctic and Indian Mammals*, British Museum (Nat. Hist.), London, 1951, 2nd edn.

R. K. VARSHNEY

*A Biologists Confrerie,
Raj Bhawan, Manik Chowk,
Aligarh 202 001, India*

NEWS

1999 TWAS awards in basic sciences

Each year, the Council of the Third World Academy of Sciences (TWAS) awards five prizes (US \$ 10,000) to individual scientists from developing countries who have made outstanding contributions to the advancement of basic sciences (biology, chemistry, mathematics, physics, basic medical sciences).

The 1999 TWAS awards in basic sciences have been awarded to the following scientists who shall receive the prize money and a plaque commemorating the award on the occasion of the next General Meeting of the TWAS, to be

held in Tehran, Iran, at the end of the year 2000.

Basic Medical Sciences: Esper A. Cavalheiro, Universidade Federal de São Paulo, Escola Paulista de Medicina, Depto. de Neurologia e Neurocirurgia, São Paulo, Brazil. For his fundamental contributions to the field of neuroscience, in particular for the development of an experimental model of epilepsy which has advanced the understanding of seizure mechanisms.

Biology: Raghavendra Gadagkar, Centre for Ecological Sciences, Indian Institute of Science, Bangalore, India. For his fun-

damental theoretical and empirical studies on tropical social wasps that have contributed significantly to our understanding of the forces that mould the evolution of social life in animals.

Chemistry: Darshan Ranganathan, Indian Institute of Chemical Technology, Uppal Road, Hyderabad, India. For her outstanding contributions to bioorganic chemistry, particularly in the area of supramolecular assemblies, molecular design and chemical simulation of key biological processes, as well as for her work on the design of hybrid peptides which has