

it is rather elliptical (Teerink 1991).

Medullary configuration and index, colour, shape, and nature, scale pattern, structure, margin and distance, cross-sectional structure may, therefore, be considered to identify *H. hyaena* using the dorsal guard hairs.

ACKNOWLEDGEMENTS

We thank Dr. J.R.B. Alfred, Director, Zoological Survey of India for permission to carry

out this study. We are indebted to Dr. S. Chakraborty, Scientist 'E' for suggestions and encouragement.

April 4, 2002

J.K. DE

R. CHAKRABORTY

Zoological Survey of India,
F.P.S. Building,
27, J.L. Nehru Road,
Kolkata 700 016,
West Bengal, India.

REFERENCES

- BRUNNER, H. & B.J. COMAN (1974): The Identification of Mammalian Hair. Inkata Press, Victoria, Australia. Pp. 196.
- CHAKRABORTY, R. & J.K. DE (1995): Structure and pattern of cuticular scales on mid-dorsal guard hairs of Marbled Cat, *Felis marmorata charltoni* Gray (Mammalia: Carnivora: Felidae). *Rec. zool. Surv. India* 95(1-2): 65-70.
- CHAKRABORTY, R., J.K. DE, S. CHAKRABORTY (1996): Identification of dorsal guard hairs of Indian species of the *Panthera* Oken (Carnivora: Felidae). *Mammalia* 60(3): 473-480.
- CHAKRABORTY, R., J.K. DE, S. CHAKRABORTY (1999): Identification of dorsal guard hairs of the species of Indian lesser cats (Carnivora: Felidae). *Mammalia* 65(1): 93-104.
- DE, J.K. & R. CHAKRABORTY (1995): Structure and pattern of guard hairs of crab-eating mongoose, *Herpestes urva* (Hodgson) (Mammalia: Carnivora: Herpestidae). *Proc. zool. Soc., Calcutta*, 48: 33-36.
- DE, J.K., S. CHAKRABORTY, R. CHAKRABORTY (1998): Identification of dorsal guard hairs of five Indian species of Mongoose, *Herpestes* Illiger (Mammalia: Carnivora). *Mammalia* 62(2): 285-295.
- ELLERMAN, J.R. & T.C.S. MORRISON-SCOTT (1966): Checklist of Palaearctic and Indian Mammals. *Brit. Mus. Nat. Hist. London*. Pp. 810.
- HAUSMAN, L.A. (1920): Structural characteristics of the hair of mammals. *Amer. Nat.* 54: 496-523.
- HONACKI, J.H., K.E. KINMAN & J.W. KOEPL (1982): Mammal species of the world. Allen Press, Inc. & The Association of Systematics Collections, Lawrence, U.S.A. Pp. 694.
- KOPPIKAR, B.R. & J.H. SABNIS (1976): Identification of hairs of some Indian Mammals. *J. Bombay nat. Hist. Soc.* 73: 5-20.
- KOPPIKAR, B.R. & J.H. SABNIS (1977): Further studies on the identification of hairs of some Indian mammals. *J. Bombay nat. Hist. Soc.* 74: 50-59.
- MOORE, T.D., L.E. SPENCE & E.E. DUGNOLLE (1974): Identification of the dorsal guard hairs of some mammals of Wyoming. *Wyoming Game and Fish Dept. Bull.* No. 14. Cheyenne. Pp. 77.
- TEERINK, B.J. (1991): Hairs of West-European Mammals. Cambridge University Press, Cambridge. Pp. 223.
- TIKADER, B.K. (1983): Threatened Animals of India. Zoological Survey of India, Calcutta. Pp. 307.

4. THE STATUS OF GAUR *BOS GAURUS* IN NORTH CACHAR HILLS DISTRICT OF ASSAM

(With one text-figure)

The gaur *Bos gaurus* H. Smith is widely distributed in northeastern India. However, except for a survey in north Bengal (Bhattacharyya *et al.* 1997) and a status report from Dibang Valley district, Arunachal Pradesh (Choudhury 1999), no significant work on this

bovine has been done in the region. The North Cachar Hills district (24° 59'-25° 49' N, 92° 31'-93° 28' E) of Assam is a known gaur area. During field visits between 1986 and 1997, information on the species, both past and present was gathered from the district. I report the findings here.

Till 1950s, the gaur was widespread and common all over the northern areas of the district. Stracey (1963) reported a large population with some majestic bulls in the same area. In the southern half, which is dominated by the lofty Barail Range (rising beyond 1,900 m above msl), the species was less abundant, possibly due to the mountainous terrain. In the northern areas, the main forest type is deciduous, while in the south it is evergreen. Topographically, the northern areas are rolling plateau while in the south the mountain slopes and cliffs are steep.

At present, a small number of gaur occur in the Langting-Mupa Reserved Forest (RF), (493.4 sq km) and in the Sarkihading Range in the north, and northeast respectively and Krungming RF (108.4 sq. km) in the northwest. One female calf was captured in Krungming RF in the early 1980s and sent to the Assam State Zoo at Guwahati. Stray animals still survive in the unclassified forests between Sangbar and Umrangsu (proposed Khorongma Wildlife Sanctuary), also in the northwest. In the main Barail Range, the gaur is no longer found, but stragglers are still met with near Laike, near the Assam-Nagaland border, Simleng river area in the southwest, and the catchment area of Jenam river towards the southeast. Stray individuals are occasionally met with in the basin of the Diyung river between Haflong and Dihangi.

The population in the northeast is contiguous with that of Dhansiri RF in Karbi Anglong and Intanki Wildlife Sanctuary in

Nagaland (Choudhury 1997). Both these areas have a sizeable gaur population.

The first major threat to the gaur came at the end of the 19th century when the hill section railway, between Lumding and Badarpur, was constructed, which divided the entire habitat into two. Along with the railway came hunters from outside. But the situation was not still bad, till the rinderpest of 1966, which took a heavy toll in Langting-Mupa RF and adjacent areas (Choudhury 1995). The population recovered to a great extent and in the 1970s, the species was 'common' at places although it could not reach its former abundance. New settlements had started coming up in many of the areas, including reserve forests, in the late 1970s followed by logging. The latter increased significantly in the 1980s, but took a menacing turn in the 1990s. Bulk of Langting-Mupa RF and adjacent unclassified forests suffered heavily, both due to logging as well as encroachment. A number of timber-based industries, especially sawmills, came up in many places like Maibong, Langting, Hatikhali, Mandardisa, Diyungmukh and other areas. These factors along with the local growth of human population have resulted in degradation and alteration of the habitat. Easy availability of firearms has resulted in increased poaching for meat as all the local tribes: the Dimasa Kacharis, Kukis (Hmars, Thadous, Biates, Rangkhawls Paites), Jemi Nagas, Jaintias and Karbis relish gaur meat. The gaur population declined drastically.

It is difficult to make an accurate population estimate as the animals are extremely shy due to regular persecution and are rather thinly distributed. However, after visiting all the known and potential areas and interviewing local hunters/poachers and other tribal villagers, it was generally estimated that 80-120 gaurs were there in Langting-Mupa RF in 1992-94 while 10-20 in Krungming RF in 1997. Elsewhere, 10-20 still survive in the unclassified forests between Sangbar and Umrangsu, 6-10 in the Jenam river basin,

Table 1: Measurements (in cm) of horns of some gaurs examined in north Cachar Hills district

	Sp-1 (m)	Sp-2 (m)	Sp-3 (m)
Maximum spread	85.0	72.0	78.0
Tip to tip (span)	56.0	48.0	46.0
Sweep (across forehead)	-	-	158.0
Girth at base (maximum)	-	30.0	38.0
Maximum length of a single horn	-	-	63.0

Sp (specimen)-1: Upper Hmartlangmoi;

Sp-2: Lower Hmartlangmoi; Sp-3: Dihangi; m: male

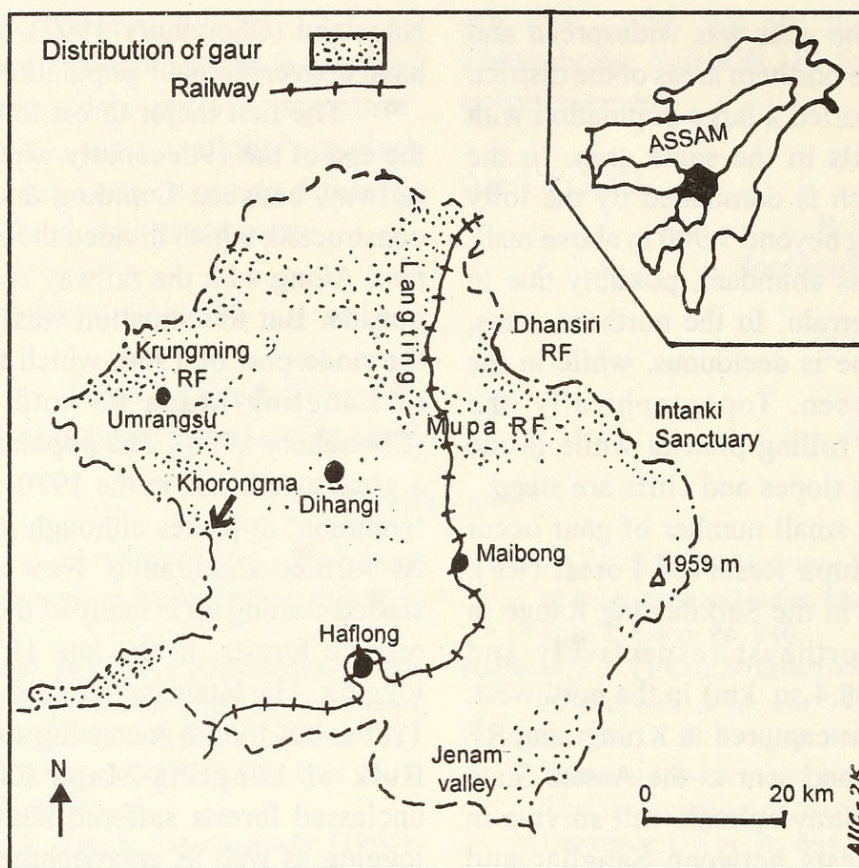


Fig. 1: Map of North Cachar Hills District, Assam showing the distribution of gaur

and a fluctuating population of 20-50 in Sarkihading Range. The last named area is contiguous with Dhansiri RF of Karbi Anglong district and Intanki Wildlife Sanctuary of Nagaland. In Dhansiri, a healthy population of a few hundred (up to 400) survives (Choudhury 1993, 1998) while a Forest department census in 1978 sighted 67 in parts of Intanki. In Simleng river, Laike areas and Diyung basin (Dihangi area) perhaps less than 20 survive. The population in Langting-Mupa RF will now be less than 100 as there is no sign of check on logging as well as hunting. The total habitat available for the species in the district is above 500 sq. km (Fig. 1).

Presence of domestic stock in the encroachments and 'Forest Villages' is a potential source of diseases like anthrax, foot-and-mouth, and rinderpest.

Habitat destruction and poaching with guns and rifles continue to be major threats, and

unless conservation measures such as creation of protected areas and enforcement of the Wildlife (Protection) Act are taken, the future of the animal is bleak. The beginning of insurgency since mid-1990s all over the district has made the situation worse. Ultramodern arms such as the AK47 rifle are now available to the extremist guerrillas, and the Forest Department Officials are threatened. An unknown number of wild animals, including the gaur have been killed, mostly by the villagers and hunters/poachers while timber smugglers have a free run.

Part of Krungming RF, 'Khorongma' area, Sarkihading Range and parts of Langting-Mupa RF need to be brought under the protected area network once the situation improves.

July 19, 2001 ANWARUDDIN CHOUDHURY
The Rhino Foundation for Nature in NE India,
C/o The Assam Co. Ltd., Bamunimaidam,
Guwahati 781 021, Assam, India.

REFERENCES

- BHATTACHARYYA, S., A.U. CHOUDHURY & C.G. BISWAS (1997): A collaborative study on gaurs (*Bos gaurus* H. Smith) in north Bengal, West Bengal, India. WWF-India, Eastern Region, Calcutta. 79 pp. + maps.
- CHOUDHURY, A.U. (1993): A Naturalist in Karbi Anglong. Gibbon Books, Guwahati. 88 pp. + maps.
- CHOUDHURY, A.U. (1995): Mammals of Southern Districts of Assam. *Cheetal* 34(2): 10-17.
- CHOUDHURY, A.U. (1997): The imperiled biodiversity of Nagaland. *Sanctuary Asia* XVII(2): 38-45.
- CHOUDHURY, A.U. (1998): Dhansiri Tiger Reserve. Revised proposal. The Rhino Foundation for Nature in NE India, Guwahati. 30 pp. + map.
- CHOUDHURY, A.U. (1999): The gaur *Bos gaurus* in Dibang Valley district of Arunachal Pradesh. *J. Bombay nat. Hist. Soc.* 96(2): 311-313.
- STRACEY, P.A. (1963): Wildlife in India. Ministry of Food & Agriculture, Govt. of India, New Delhi.

5. DISTRIBUTION AND STATUS OF THE GAUR *BOS GAURUS* IN NAGALAND

(With one text-figure)

The gaur *Bos gaurus* H. Smith is still widely and sparsely distributed in northeastern India, however, it is a rather poorly documented species. Except for a survey in north Bengal (Bhattacharyya *et al.* 1997) and some brief status reports (Choudhury 1992, 1993, 1995, 1999, 2001), no specific work solely for this species has been taken up in the region. Its distribution in Assam has been mapped recently (Choudhury 1997a). Here I report the past and present status of the species in the state of Nagaland (25° 10'-27° 01' N, 93° 17'-95° 15' E) (area: 16,579 sq. km) (Fig. 1) as ascertained during field visits in 1991, 1992, 1996 and 2001. The area was referred to in the past as the Naga Hills of Assam, as the entire area is hilly with small plains near Dimapur. The highest peak is Mt. Saramati (3,842 m above msl) on the India-Myanmar border. Mt. Japfu (3,043 m above msl) is the second and is on the Barail range. The lowest evaluation is in the riverbeds near Dimapur (less than 150 m above msl).

Some information on gaur in Nagaland is given in Choudhury (1997b). The current distribution of the species is mostly confined to Intanki Wildlife Sanctuary in Dimapur district. Some of the animals from this population also wander up to near Jalukie, Samjuram (both in Dimapur district), Peren and Tening (Henima) (both in Kohima district) (Fig. 1). Being located

near the Assam-Nagaland border, the animals move freely between Intanki and Assam's Dhansiri Reserve Forest (Choudhury 1998) and also to the unclassified forests of Assam's North Cachar Hills district and occasionally to Manipur's Tamenglong district. Small numbers of gaur are thinly distributed in the forests along the India-Myanmar border in Tuensang, Mon and Phek districts. An occasional animal is encountered, mostly wandering from Assam, in the Singphan Reserve Forest of Mon district, which also share borders with Assam and Arunachal Pradesh. There are no recent reports from other districts, although a few survived in Mokokchung, Wokha and Zunheboto even in the early 1980s.

During field visits, I examined and measured 11 preserved horns (seven in the Forest Museum, Kohima; three in Samjuram village and one at Zunheboto) of the animals shot in different parts of Nagaland. Three of these were large. The measurements of some are listed in Table 1. The animal from Zunheboto was killed by local hunters in the foothills area of Saramati, Tuensang district in 1967. In 1938-40, villagers near Ajikami village in Akuloto sub-division of Zunheboto district killed a bull after it had injured some villagers. It reportedly came to mate with a semi-wild cow mithun *Bos frontalis* (S. Hukiye, pers. comm.).



Choudhury, Anwaruddin. 2002. "The Status of Gaur Bos Gaurus in North Cachar Hills District of Assam." *The journal of the Bombay Natural History Society* 99, 506–509.

View This Item Online: <https://www.biodiversitylibrary.org/item/189681>

Permalink: <https://www.biodiversitylibrary.org/partpdf/155755>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Biodiversity Heritage Library

Copyright & Reuse

Copyright Status: In Copyright. Digitized with the permission of the rights holder

License: <http://creativecommons.org/licenses/by-nc/3.0/>

Rights: <https://www.biodiversitylibrary.org/permissions/>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.