

Distribution and status of Rufous-necked Hornbill *Aceros nipalensis* in Myanmar

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Abstract: The Rufous-necked Hornbill *Aceros nipalensis* was once widely distributed in Myanmar, and was formerly recorded in the northern, central, southeastern and eastern regions of the country as well in northern Taninthayi (= Tenasserim). Recently, however, it has been recorded at only a few sites, and is currently listed as Vulnerable (BirdLife International 2001). Surveys from 2000 to 2012 recorded this species in northern, southern, and western Myanmar. In North Myanmar (Kachin State and Sagaing Division), this species has been recorded at 12 sites; most individuals were located in the Hponkanrazi (n=64) and Hukaung Valley (n=76) Wildlife Sanctuaries (WS), with at least 64 and 76 individuals recorded, respectively. In the west (Chin Hills) and south (Magwe Division), this species has been found only in three areas, one area in West and two areas in South, with a total of four and 10 birds recorded at West and South respectively. The results of recent surveys have found only a few individuals in most of the surveyed areas but indicate that the Hponkanrazi and Hukaung Valley WS's support the highest number of individuals. Widespread habitat loss, degradation and disturbance represent a significant threat to this species. Hunting is likewise a major threat. This paper is not a recent population estimate for the species. There is an immediate need for additional surveys to clarify their recent population status in Myanmar. Some areas, such as eastern Myanmar (Shan and Kayah States), remain to be surveyed for Rufous-necked Hornbill. Current gaps in our knowledge include present status and long-term population trends, and we recommend revisiting all sites where this species occurred historically, to address this.

Keywords: Rufous-necked Hornbill, *Aceros nipalensis*, Myanmar, Hponkanrazi Wildlife Sanctuary, Hukaung Valley Wildlife Sanctuary

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INTRODUCTION

The Republic of the Union of Myanmar is the largest country in mainland Southeast Asia with a total land area of 676,577 km². It is located between latitude 9°28' - 28°29' N and longitude 92°10' - 101°10' E. The country is bound by the People's Republic of China in the north and northeast, Lao P.D.R. and Thailand in the east, and Bangladesh and India in the west. Myanmar is approximately 2,100 km (length) x 925 km (width) and has seven divisions and states respectively, which are the Ayeyarwaddy, Bago, Magwe, Mandalay, Sagaing, Tanintharyi and Yangon Divisions, and Chin, Kachin, Kayah, Kayin, Mon, Rakhine and Shan States (Figure 1). The country is divided into seven geographic regions, which are North, East, South, West, Southwest, Central and Tanintharyi (formerly known as Tenasserim) (Figure 2).

The physical geography of Myanmar is structurally complex and diverse, with steep mountain ranges, upland plateaus and hill valleys in the eastern, northern and northwestern regions, while the undulating central dry zone is surrounded by the western coastal range. The southern part of the country is characterized by a lowland deltaic region and a narrow coastal strip adjoins peninsular Thailand. From north to south, four major rivers occur, namely the Ayeyarwaddy (formerly known as the Irrawaddy), Chindwin, Sittaung and Thanlwin (formerly known as the Salween), and these are associated with the complex terrain formed by large drainage systems and their wider tributary networks. As part of the eastern Himalayan mountain range, Mount Hkakaborazi, located in the far north of the country with an altitude of 5,881 m asl, is the highest mountain in southeast Asia. The climate of Myanmar is classified as tropical monsoonal, with three distinctive seasons, a hot season from March to May, rainy season from June to October, and a cold season from November to February. Rainfall is highly variable ranging from 500 mm in the Dry Zone to over 6,000 mm in Tanintharyi Division and northern Rakhine State. Due to the interaction of geography, topography and climate, Myanmar contains a great variety of habitats and ecosystems that support a rich biodiversity. With about half (48%) of the mainland still covered by forests (FAO 2010), Myanmar ranks sixth out of the 11 southeast Asian countries in terms of percentage of land area covered by forests (FAO 2009).

Due to the geography of Myanmar, habitat types are very diverse. As a result, Myanmar also supports a great variety of avifauna, approximately 1,100 species. Among the several hundred species of resident forest birds, there are 10 species of hornbills. These include Northern Brown *Ptilolaemus austeni*, Southern Brown *Ptilolaemus tickelli*, Bushy-crested *Anorrhinus galeritus*, Oriental Pied *Anthracoseros albirostris*, Great *Buceros bicornis*, Helmeted *Rhinoplax vigil*, White-crowned *Berenicornis comatus*, Rufous-necked *Aceros nipalensis*, Plain-

pouched *A. subruficollis* and Wreathed Hornbills *A. undulatus*. This paper focuses on only the Rufous-necked Hornbill, which is listed as 'Vulnerable' by BirdLife International (2001). This species originally occurred in mountainous regions between eastern Nepal and Vietnam. Although now absent or very rare throughout its distribution, the Rufous-necked Hornbill still occurs in southern China, northeastern India, Myanmar, western Thailand, Laos and Vietnam. There are no confirmed recent records from Bangladesh and the species may be locally extinct (BirdLife International 2001).

Historical status and distribution of Rufous-necked Hornbills in Myanmar

The Rufous-necked Hornbill was once widely distributed in Myanmar. It was recorded from North, Central, East and South Myanmar and north Tenasserim (=Taninthayi) (Tables 1 and 2, Figure 3).

RESULTS

Myanmar has been very poorly covered by ornithological surveys in recent years. However, a limited number of recent ornithological expeditions conducted from 2000 to 2012 found the Rufous-necked Hornbill in North, South and West Myanmar (Figure 3, Tables 1 and 2). In North Myanmar (Kachin State and Sagaing Division), this species has been recorded at 12 sites; in Kachin State at Hkakarborazi National Park, Hponkanrazi Wildlife Sanctuary, Putao, Machanbaw, Naungmung, Kaunglanphu, Sumprabum, Myitkyina, Chibwe and Tsawlaw areas, Indawgyi Wetland Wildlife Sanctuary and Hukaung Valley Wildlife Sanctuary (Figure 4); Hukaung Valley WS is situated between Kachin State and Sagaing Division.

These records show that at least 217 individuals of Rufous-necked Hornbill have been encountered recently in North Myanmar.

In West Myanmar (Chin State and southern part of Naga Land in Sagaing Division), at least 15 birds at Tishi Village in 2009 (Saw 2009) and one bird at Tikun Village in 2012 (Thet et al. 2012) were recorded near Mount Saramati on the southern part of Naga Land in Sagaing Division. In Chin State (Chin Hills), a pair was recorded at Natmataung National Park in 2000 (Thet 2001) and a pair was found near Twishi Village at Matupi area in 2012 (Thet et al. 2012) (Figure 5). Above these records, about 20 individuals of Rufous-necked hornbill were listed in West Myanmar. Formerly this species was not found there.

In South Myanmar, especially in the north-west of South Myanmar, a total of 10 birds were recorded at two sites (Figure 6). Four birds on

Natyekan Mountain Range and six birds near Goatsiyo Village were recorded respectively at Ngape area of Magwe Divison in 2009 (Ngwe et al. 2009). This is the first record of this species from there. Robson (2008) lists the species only from the east of South Myanmar. Of these recent surveys from 2000 to 2012, this species has been recorded at three geographic regions of Myanmar; most of these were located in the North especially at Hponkanrazi and Hukaung Valley Wildlife Sanctuaries, with at least 64 and 76 individuals recorded, respectively.

CONCLUSIONS

Habitat loss and over-hunting are the two major threats facing Rufous-necked and other Hornbill species in Myanmar. Though all species of hornbills in Myanmar are protected under the Protection of Wildlife and Conservation of Natural Area Law (Forest Department 1994), large numbers of hornbills are hunted for food, and their casques and tail-feathers (of Great and Rufous-necked Hornbills) are used by the Naga tribe for ceremonial and tribal headgear; moreover, some hornbills are kept as pets (author's personal observations).

The results of the surveys indicated that Hponkanrazi and Hukaung Valley Wildlife Sanctuaries in North and Mount Saramati area in West Myanmar are of high national significance for the conservation of the birds. Potentially it is also of high global significance, and a major global site for Rufous-necked Hornbills. The recent status of Myanmar's hornbills remains poorly known. Some areas have not yet been surveyed for Rufous-necked Hornbill, especially in the East (Shan and Kayah States) and Tenasserim (Kayin and Mon States) where security concerns hamper fieldwork, and numerous information gaps exist for this species. More data is urgently needed to properly understand the status and conservation management needs of all hornbills in Myanmar. There is an immediate need for additional surveys to clarify their conservation status and distribution at sites where these birds were historically recorded or the habitat appears suitable.

Hornbill habitats need to be protected from further destruction. All human disturbances should be stopped, and particular attention should be paid to protection of large, old-growth trees in the forests not encompassed within the protected area system. These trees are likely to provide hornbill breeding sites. Hunting and other direct threats to the bird should be eliminated and existing protective legislation enforced. There is an urgent need to heighten awareness amongst the general public, decision makers, planners and governmental administrators about the value of hornbills and the need to conserve their natural habitat.

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Table 1. Historical and recent status and distribution of Rufous-necked Hornbills in north Myanmar.

Location	Reference	Notes
Kachin State	Smythies (1949)	Recorded in Naungmung area in 1948.
	Than et al. (In prep.)	At least two birds on the Shinsarkhu Range in Naungmung area in 2007-2012.
		Two at Barbulone in Naungmung area in 2007-2012.
		Three on Namhti Range in Naungmung area in 2007-2012.
		Three at Sinlwindam Village in Naungmung area in 2007-2012.
		Two at Gawlae Village in Naungmung area in 2007-2012.
		Three on Maza Range in Naungmung area in 2007-2012.
		Two at Naungmung in 2007-2012.
		At least 17 birds at seven sites in Hkakarborazi National Park in 2007-2012.
	King et al. (2001)	Maximum of 38 individuals in Hponkanrazi Wildlife Sanctuary in 1998-1999.
	Thet et al. (2011)	At least 64 birds at 16 sites in Hponkanrazi Wildlife Sanctuary in 2011.
		Four birds were seen near Mali Yein village in Putao area in 2011.
	Ngwe et al. (2009)	Four birds at Ahtangar Village in Machanbaw area in 2009.
	Than et al. (In prep.)	Two birds on Naikha Range in Machanbaw area in 2012.
	BANCA (2009)	One near Wuni Village in Kaunglanphu area in 2009.
		Two at Kaunglanphu in 2009.
	Stanford and Ticehurst (1938–1939)	One bird near Hpungchanhka in Sumprabum area in 1933.
	Smythies (1949)	Recorded near Hpungchanhka in Sumprabum area.
	BANCA (2009)	Four birds at Hpa Wun Village in Sumprabum area in 2009.
	Ngwe et al. (2009)	Eight near Khagayanram Village in Sumprabum area in 2009.
	Stanford and Ticehurst (1938–1939)	A pair near Shagribum in Injangyang area in 1934.

Location	Reference	Notes
	Smythies (1949)	A flock of about eight and one at Laukkaung, N'Mai Hka drainage in Chipwe in 1948.
	Ngwe et al. (2009)	Three birds in Chibwe in 2009.
	BANCA (2009)	Two birds at Wusoke in Tsawlaw area in 2009.
	Ngwe et al. 2010	Seven near Mangi Village in Tsawlaw area in 2010.
		Two at Lakin River in Tsawlaw area in 2010.
	BANCA (2009)	Two at Bambane Village in Myikyina area in 2009.
		One bird at Myitsone in Myikyina area in 2009.
	Thet and Van dar Van (2005)	One bird in Indawgyi Wetland Wildlife Sanctuary in 2005.
Sagaing Division	Thet et al. (In prep.)	At least 12 individuals in Hukaung Valley Wildlife Sanctuary in 2009-2011.
	Thet et al. (In prep.)	At least 64 individuals in Hukaung Valley Wildlife Sanctuary in 2009-2011.

Table 2. Historical and recent status and distribution of Rufous-necked Hornbills in other regions of Myanmar.

Region	Location	Reference	Notes
West	Sagaing Division	Saw (2009)	At least 15 bird at Tishi village on Naga Land in Lashy area in 2009.
		Thet et al. (2012)	One bird at Tikun village on Naga Land in Lashy area in 2012.
	Chin State	Thet (2001)	A pair in Natmataung National Park in 2000.
		Thet et al. (2012)	A pair near Twishi village in Matupi area in 2012.
Central	Sagaing Division	Smith (1942)	Three birds at Katha district in 1932.
East	Shan State	Bingham and Thompson (1900)	Recorded at Loi-San-Pa in Nam Sam area in 1889-1900.
	Kayah State	Salvadori (1889)	One bird at Taho (Taho-au) in Demoso area in 1888.
South	Kayin State	Smith (1942); Smith et al. (1940–1944)	Recorded at north-west of Kolo valley, Nattaung in Hpapun area in 1940.
	Magwe Division	Ngwe et al. (2009)	Four birds on Natyekan Mountain Range in Ngape area in 2009.
			Six birds near Goatsiyo village in Ngape area in 2009.
Tenasserim	Kayin State	Tickell (1864); Hume and Davison (1878)	Recorded at Mulayit Wildlife Sanctuary in Kyain Seikkyi area.
	Mon State	Lowe (1933)	One male at Ta-ok plateau, in Kyaikmayaw area in 1924.

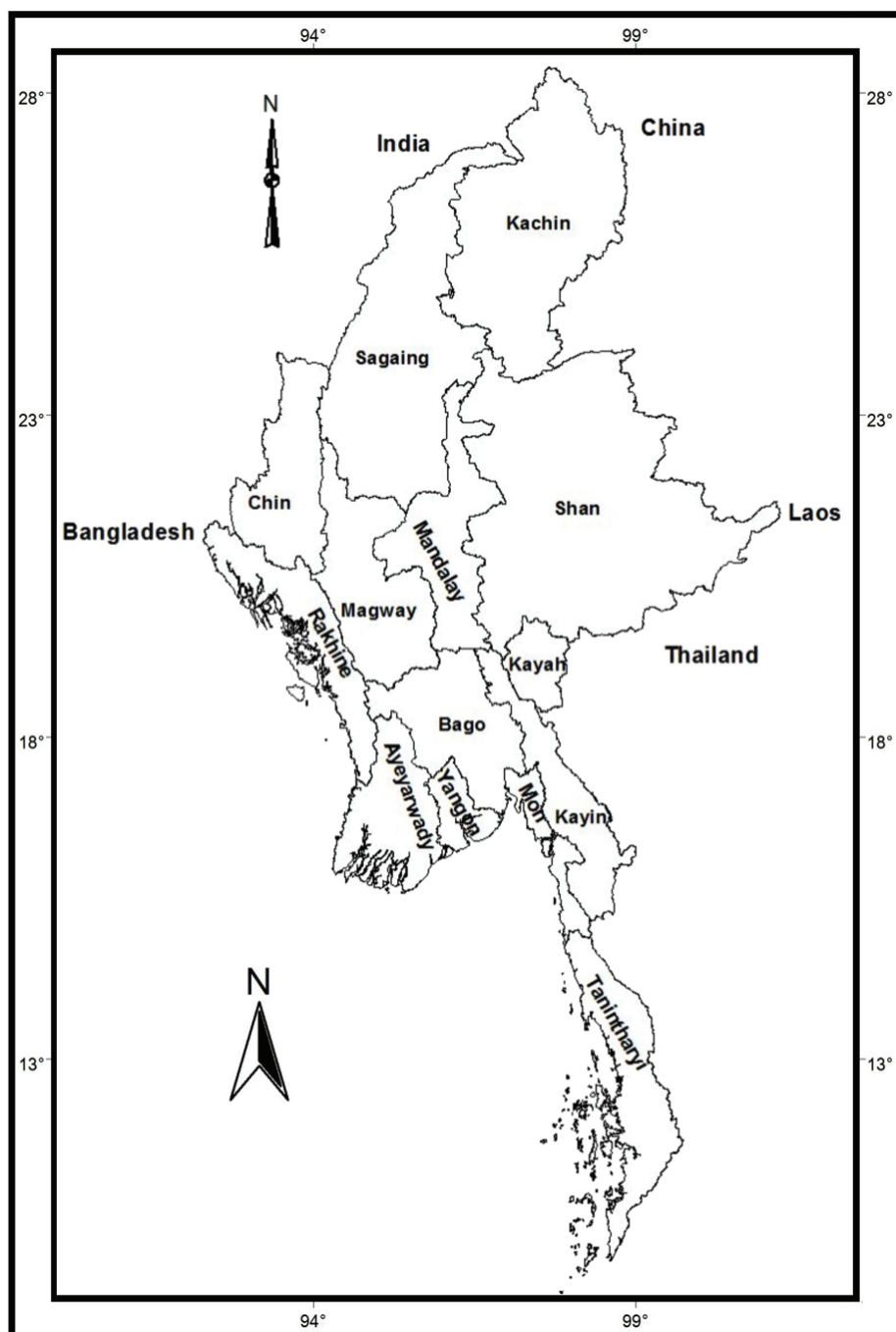


Figure 1. Geographical boundaries of states and divisions in Myanmar.

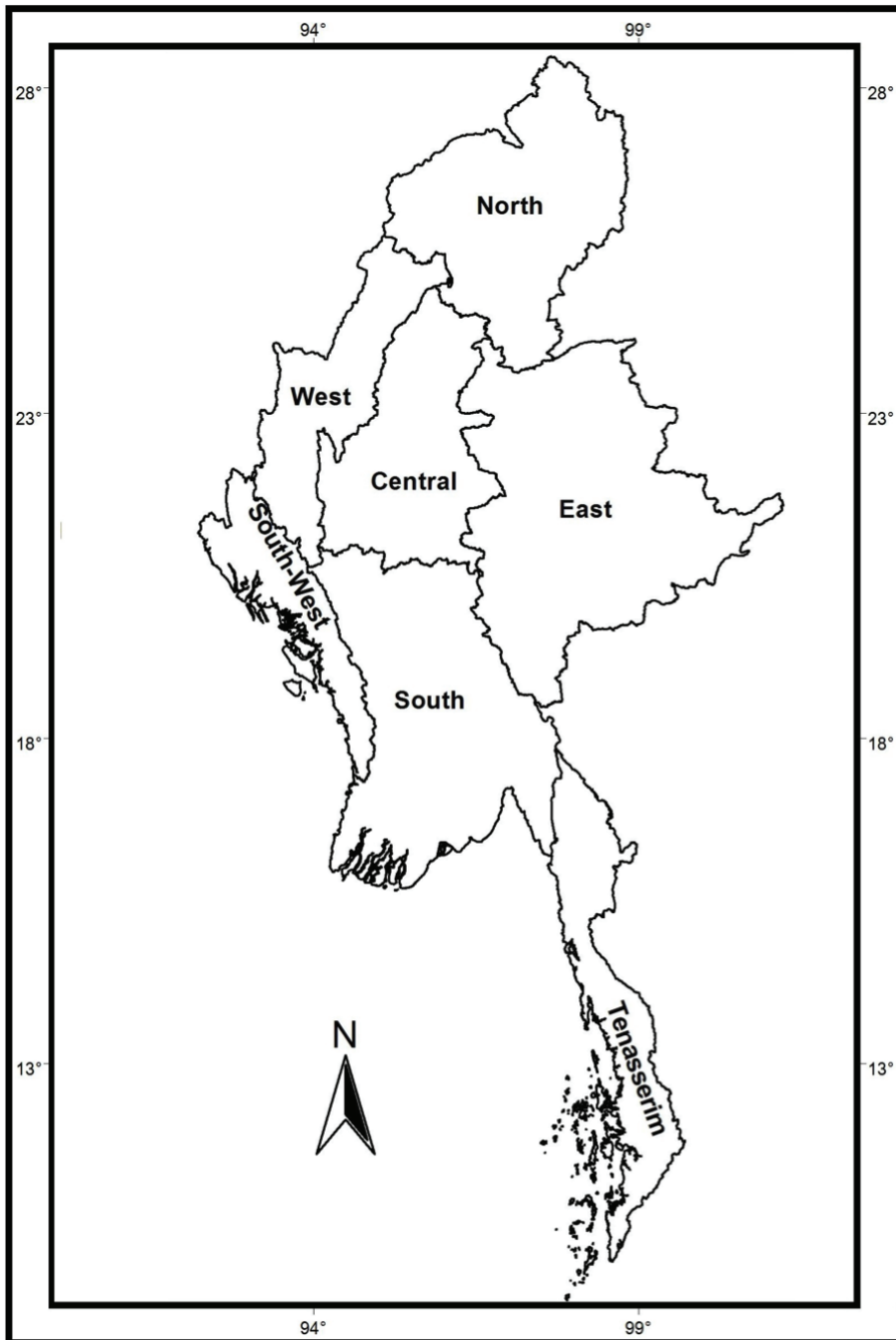


Figure 2. Geographic regions of Myanmar.

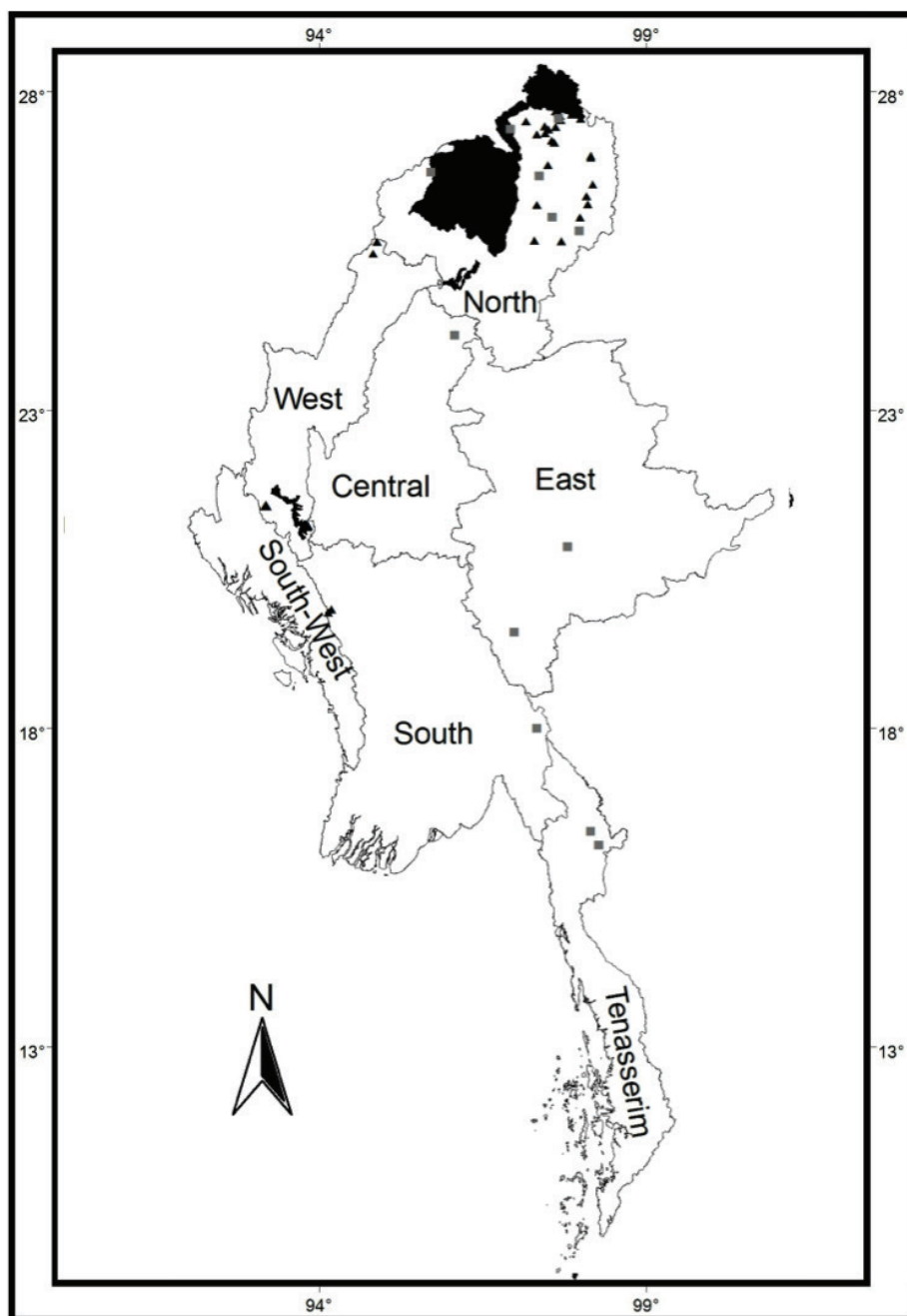


Figure 3. Historical and recent distribution of Rufous-necked Hornbills in Myanmar. (Lighter shaded denotes where historical sightings have occurred and darker shaded denotes where recent sightings have occurred.)

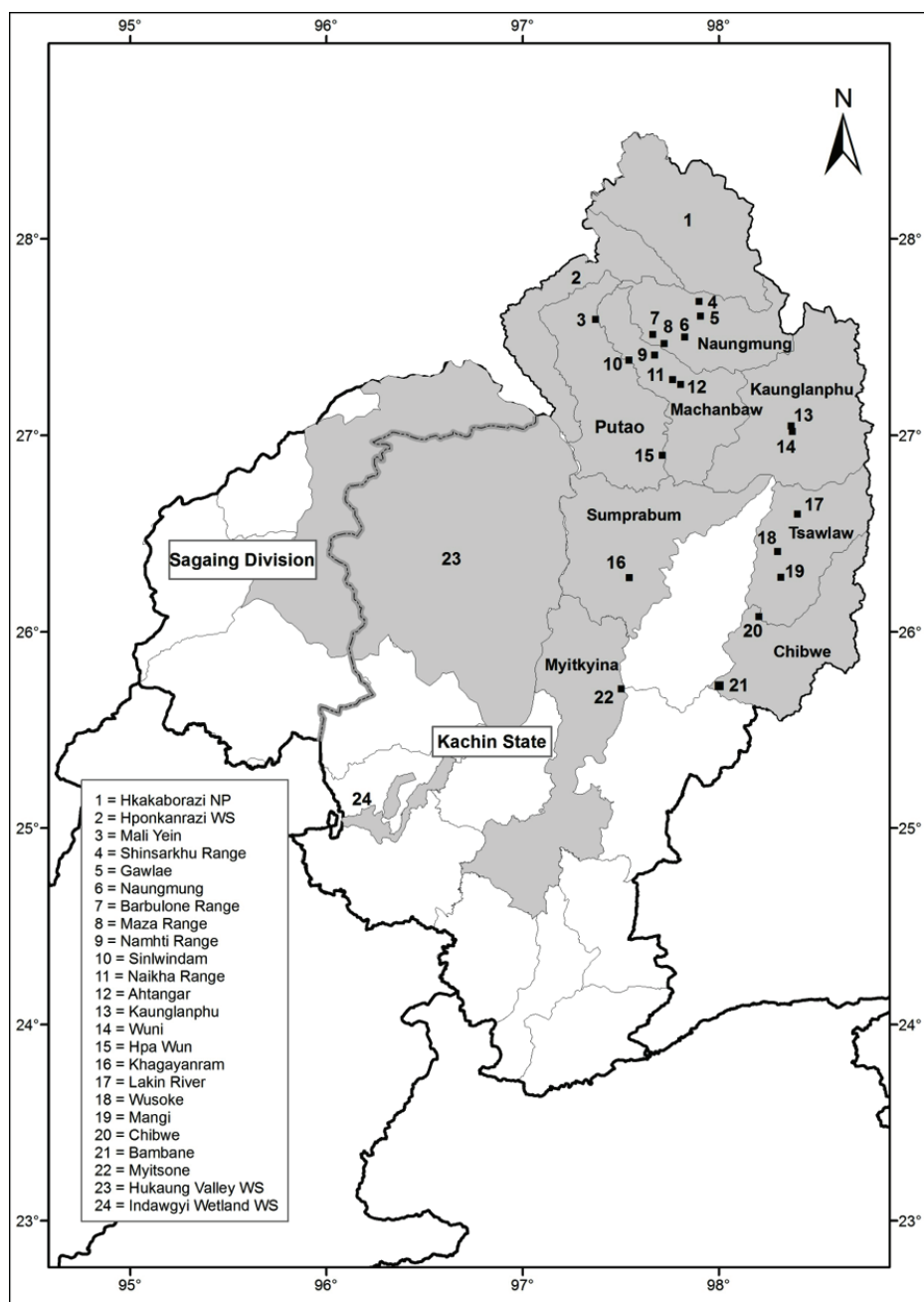


Figure 4. Recent recorded sites of Rufous-necked Hornbills in North Myanmar.

Note: Shaded areas denotes region where recent sightings have occurred. Locations indicated on map correspond to Table 1.

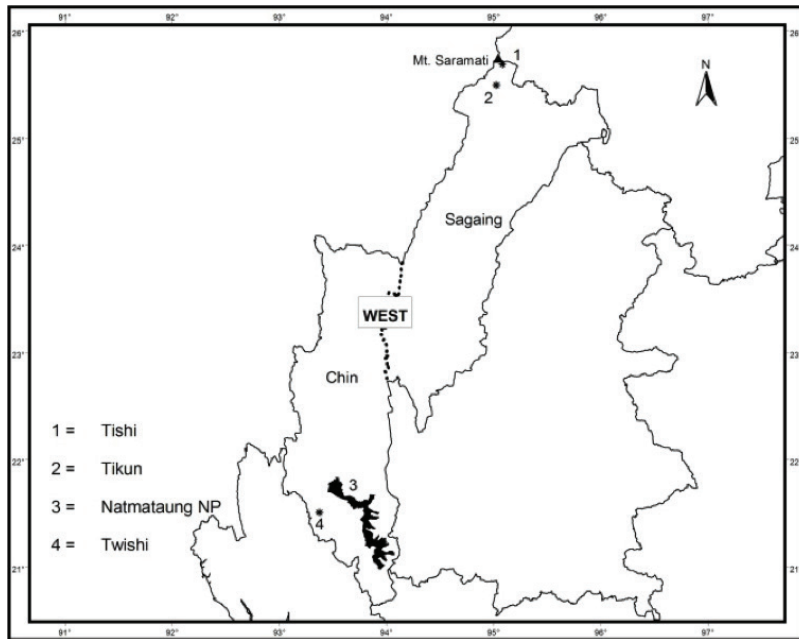


Figure 5. Recent distributions of Rufous-necked Hornbills in West Myanmar.

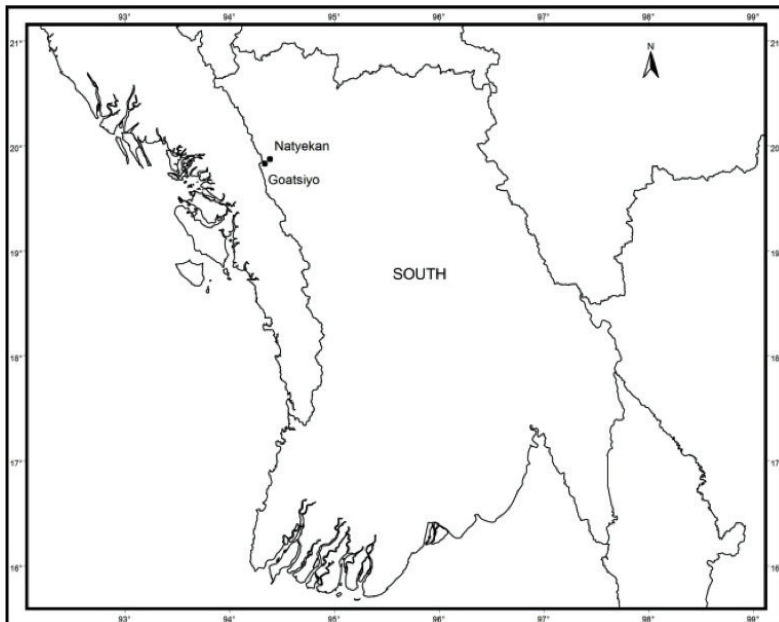


Figure 6. Recent distributions of Rufous-necked Hornbills in South Myanmar.