NOTES ON RHINOCEROSES IN BURMA, *R. SONDAICUS* AND *SUMATRENSIS*.

BY

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Information relating to some of the species of Asiatic Rhinoceroses in the various works I have consulted appears very incomplete. In order to add to it, it is desirable on the part of those who have any acquaintance, however small, with these animals or their habits to place such on record. Though I consider, I have not had the luck in shooting them that I deserve, hunting them has afforded me an opportunity of learning a little of their habits.

There are in Burma two species for certain, *viz.*, the larger and single-horned variety of the Burmans, *R. sondaicus*, Kyan-hsin or Pyan-hsin (elephant-rhinoceros) and the lesser double-horned, *R. sumatrensis*, Kyan. On the authority of the late Dr. Mason, Kyan is the generic term in Burma for a rhinoceros, signifying "to be firm in structure and mind." They are known to the Karens as Ta-do or Ta-do-khaw, and to the Shans as Sawon.

Both species may occasionally be met with inhabiting the same stretch of country and visiting the same pools or wallows. Burmans and Karens, as a rule, with the exception perhaps of the hunters, are much afraid of these animals, and this is perhaps not to be wondered at if we bear in mind the very ferocious character attributed to them. They are said to attack human beings without provocation, and to be most vindictive and persevering in their pursuit of the object of their anger; they do not fear elephants or tigers. Furthermore they are credited with not only stamping out but even devouring fire, and rushing in the direction of any noise they may hear. A record such as above should inspire awe in anyone believing the stories. I cannot learn anything as to how the idea of their distaste for fire arose; it is certain, however, that it is a story very generally accepted by the Burmans. That they are unsuccessful in keeping down forest fires about their haunts would by these people be attributed to the fact of their numerical weakness. Burmese and Karen hunters, who in days gone by had some experience in hunting rhino, appear to be unanimous in considering them dangerous animals, and especially so when wounded. This has also been the experience of two or three Europeans over here.

Though in exceptional cases an individual may be of a vicious temperament and inclined to be troublesome without provocation, or to charge when suddenly disturbed, as when lying down (as many kinds of animals may do), my small experience tends to make me believe that a rhinoceros is as anxious to preserve a whole hide as most other beasts. I have more than once in dense cover been closer than I really liked without being able to obtain a reasonable shot, the animal knowing he was being hunted. So far I have not had one turn on me, for which I am not sorry, not having the smallest desire that one should do so as I have learned that however ungainly and awkward their appearance may be it is a pure fallacy to consider them wanting in agility. On the contrary they are astonishingly agile. When wounded, if the assailant be in view and the animal not too sick he may charge, and he is, as I have remarked, an active and dangerous beast and what is worse requires some stopping. I have only heard of a couple of instances in which unwounded animals have given trouble. On one occasion two rhino held up a party of survey coolies in the course of their work, and on the other a rhino chased a gun bearer or hunter who managed to climb a tree, but had not got far enough up before the rhino overtook him and was able to give him a bite as well as afford him a hoist up. The Burmans state that in attacking, these brutes use their incisors freely, also the horn, and finish up by trampling on their adversary.

Mason in his work on Burma, Volume 1, page 451, writes thus:— "The common single horned rhinoceros is very abundant. Though often seen on the uninhabited banks of large rivers as the Tenasserim they are fond of ranging the mountains, and I have frequently met with their wallowing places on the banks of mountain streams two or three thousand feet above the plains."

During the past twenty years at least, and in spite of most guns having been withdrawn, I do not think anyone in the province would consider either species abundant or common, or even moderately so anywhere. If they are still so it must be in tracts most inaccessible and little visited by Europeans. It is probable that, confining themselves as they often do to localized areas, four to six animals or even a couple wandering over such, by crossing and recrossing, would make numerous tracks in many directions and this, taken in conjunction with the fact that in such areas pools and wallows would be met with which

they had entered, might without due consideration lead to the impression that rhinoceroses are abundant.

I believe, however, that in the aggregate there is a fair number of animals scattered over the country. So far I am under the impression that *R. sumatrensis* is the more common.

During a residence of several years I can only recollect some eight or nine specimens of *R. sumatrensis* and two of *R. sondaicus* being shot by European sportsmen. This cannot be said to be a large number if we consider the many Europeans who tour about the country on duty, prospecting, or in search of heavy game. In several instances the specimens of *sumatrensis* were come on unexpectedly, *i.e.*, the lucky individuals who were on the march or in pursuit of other game were unaware that rhino were to be found anywhere in their proximity. Some experience of the class of country they are most likely to be found in, leads me to the belief that as far as their pursuit goes, they are likely to enjoy immunity from annoyance, except from a few of the more ardent sportsmen.

Distribution.—They are to be met with in certain areas of the hilly tracts in Upper and several of those in Lower Burma.

Habits.—Both species in this country show a decided preference for hilly tracts and even mountainous country. I have met with tracks of both varieties at considerable elevations, especially in places infrequently visited by men. They appear to be of a restless disposition and at times given to wandering a distance from their accustomed haunts. In the hot season they are invariably found in hilly or mountainous country, by no means necessarily well wooded, but where shade is sufficient. They rarely range far from the perennial streams in which there are usually numerous pools of cool water and abundant shade. Those streams with rocky and shingly beds are preferred. The feeder streams or gullies are also worth visiting. They are extremely partial to water, and enter the pools during the night and also visit them during the heat of the day. In suitable places there are regular mud baths or wallows, some large and patronized by elephants, etc., and others much smaller. They evidently enjoy rolling in wet mud as much as buffaloes and hogs do. They visit the pools singly or may be found two together, usually a bull and cow. The night, early morning and evening is spent wandering about grazing, etc., and during the day they lie up in shade on the hillsides or on the top of the ridges above the streams.

In the cool weather they may wander a good deal as also during the rains, ranging along the ridges and visiting the head waters of streams. During the rainy season *R. sumatrensis* certainly tours through the lower-lying country, as their tracks are to be met with within, in some places, three or four miles off the railway. They do not, I think, remain for any length of time, but come down only in search of particular kinds of fodder not obtainable at other times.

With regard to the nature of their food I am inclined to think that these rhinoceroses are not great grass-feeders, but prefer to browse on leaves, twigs, shoots, etc., and they seem very partial to fruits.

In the dry season the stomach generally contains wild mangoes, figs, *Cicca macrocarpa*, leaves of trees and bamboo leaves. The fruit or leaves, etc., of the following are eaten by these animals, *viz.*,—the fruit of the 'Myauk-tanyet' (*Parkia insignis*, Kurz). The figs of the 'Sin-tha-hpan' and 'Tha-hpan,' which I find to be *Ficus roxburghii* and *F. glomerata*, but I had doubts as to the Burmans being correct as I have heard these names applied to other trees of this natural order. One point may afford a clue to the species and that is the size of the fruit, which is as large as an ordinary apple. The fallen fruit of the *Cicca macrocarpa*, 'Zibyu'; *Careya arborea*, 'Ban-bwe'; *Sandoricum indicum*, 'Thit-to,' and also that of the 'Byu,' *Dillenia pulcherrima*. The leaves, twigs, etc., of the *Castanopsis diversifolia* and *tribuloides* (Kurz), *Toddalia aculeata* (Kurz) 'Kyan-sa' or 'Pyan-sa' (lit. rhinoceros-food). 'Satsha' of which Kurz mentions the *Boehmeria hamiltoniana*, *Sarcochlamys pulcherrima*, *Trema orientalis* and *Maoutia puya*. The 'Ta-bu' or 'Ta-mu,' *Harrisonia bennetii* and *Sonneratia acida*. The twigs, shoots and leaves of the bamboo are also freely partaken of, no doubt those of the most plentiful variety of bamboo growing in their haunts. That found in the stomachs of two animals was that of the 'Kayen-wa,' *Melocanna bambusoides* (*baccifera*). They are undoubtedly partial to this bamboo, and to some extent localities in which it grows. It is a peculiar and graceful bamboo, grows singly and to a height of fifty feet and over. Each shoot comes up more or less equidistant from its neighbours, and this regularity causes a 'Kayen-wa' jungle to resemble a plantation.

Their most acute sense appears to be that of smell, and, I think, they rely much more on it than sight or hearing. Making a certain amount of noise, walking through the jungle, will not always disturb them, and

they assuredly are not very quick of sight, but the faintest puff of wind is more than enough.

The habit of depositing its ordure in one place as attributed to the African species and *R. indicus*, does not apply to these rhinoceroses, that is, if it is understood to mean that this is a place repeatedly visited for that purpose. Small heaps or mounds, perhaps the droppings of a week, may be found on the hillsides, where they lie up daily. But as a general rule I do not think they can be at all particular in the matter, as one habitually finds single droppings on their tracks on the sides of hills, ridges, etc., and an abundance of them scattered about in the beds of streams. If the pools in which they lie be disturbed one has rapid olfactory evidence that they contain more than a small quantity of their droppings. In appearance they are much the same as that of an elephant.

Burmans and others could afford no information of value as to the period of gestation. I have only twice come on the tracks of young rhinoceroses evidently at heel, and these in January.

Perhaps the most interesting feature about these creatures is the astounding way in which they ascend and descend the steepest of hillsides. In fact the steeper the gradient the more it would appear to appeal to them. As for many of the descents into the beds of streams, they are quite in the nature of slides. For a human being, certainly, a leather seat would be of greater help to him than anything else. It is equally surprising how they ever manage to climb over some of the rocky places one meets with, yet they do. They are the most difficult animals I have ever attempted to follow. I thought serow and goral quite bad enough, but rhinoceros, I think, can give them points.

The Burmans attribute their agility to the fact of their possessing three large separate claws or hoofs. In descending, only the centre one is in use, the lateral ones being employed as brakes. Going over rocks, ledges, etc., one or more toes may be employed. One thing is certain, *viz.*, that Karens and Burmans are as much astonished as we are at the way they get over seemingly impossible ground.

As regards dentition, in the skulls I have seen it is quite as irregular as has been noted by various observers.

The only sound I have heard is a kind of grunt or rather a short harsh blowing sound. I heard one, a *sondaicus*, emit this noise when

evidently surprised in cover. He heard us and had not got the wind. On being hit, unless killed outright, they usually grunt, and also do so while charging. Burman hunters say that rhinoceroses are very tenacious of life after being wounded. No doubt with the weapons they used on them they were so; the wonder is they killed them at all. As with any other kind of game, I do not think any one has a right to press trigger unless he has a reasonable shot, giving a fair chance of bagging the animal.

Pace.—When disturbed they set off at a smart gallop making a great deal of noise by rushing through all minor obstructions and as a rule making more noise than a solitary elephant. Following up immediately is generally of little use as after being disturbed they usually travel a long distance and keep a sharp look-out. It is therefore, as a rule, better to give up the hunt and take up the tracks at dawn on the following morning.

The track of a rhinoceros is unmistakable. The presence of the impress of three claw marks is sufficient, that of *sondaicus* differing only from *sumatrensis* in size.

I have heard it said and believe it is recorded that rhinoceroses cannot swim. In common with many popular ideas it is a pure fallacy. They swim well, crossing rivers, etc., when they desire to do so. I remember an instance in which one was killed while crossing the Tenasserim.

It is unnecessary to enter into a description of these animals as this may be found in various books on Natural History.

Burmans and Chinamen place a very high value on the horns and blood of rhinoceroses as medicinal articles. Wherein their virtues as drugs lie I do not know, but they are supposed to be most potent, especially in all diseases not yielding to ordinary drugs. I expect their fictitious powers are derived from the fact that, like the milk of a tigress or liver of crocodile and such other materials, they are not easily get-at-able nor always at hand to include in prescriptions. The local doctor, in the event of his patient doing badly, can always save his reputation by claiming that if he had some of these potent remedies he could still effect a cure.

After hitting a rhinoceros, if he is considered to be 'in extremis' the tracker and any followers are down on him like vultures, the first thing, an all important business, being to plug any bullet holes in order to save as much blood as possible. If any be escaping rapidly from a

wound a bamboo is there ready to receive it. Any blood that is on the ground and lost, occasions some grief.

The blood is carried in lengths of bowel and thoroughly dried over a fire so as to resemble those queer articles of diet popularly known as 'black puddings'. It is sold at the rate of a rupee for every rupee in weight.

The flesh of these animals is said by Burmans, etc., to be very good. A friend of mine declares it is so and that the liver is perhaps better than that of some other animals. I have not tried any myself being contented with ordinary fare.

Measurements of R. SUMATRENSIS—*Male*.

Height at shoulder (between uprights)	$52\frac{1}{2}''$
Length nose to dock	$98''$
Girth behind shoulder	$85''$, $86''$
Tail (docked)	$13\frac{1}{2}''$
Girth fore-arm	$28\frac{1}{2}''$
Length of head	$32''$
Length of ears	$7\frac{1}{2}''$
Length of anterior horn	$7\frac{1}{8}''$
Length of posterior horn	$3\frac{1}{2}''$

Measurements of skull, not taken.

Measurements of R. SUMATRENSIS—*Female*,

I have recorded in Volume XVI., No. 1, page 160, of this Journal.