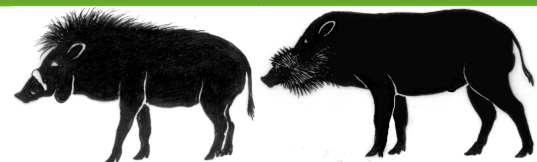


# Ecology and Conservation



## First observations on Moluccan Babirusa (*Babyrousa babirussa*). A translation from a recently rediscovered 1770 book that describes the Babirusa on Buru Island

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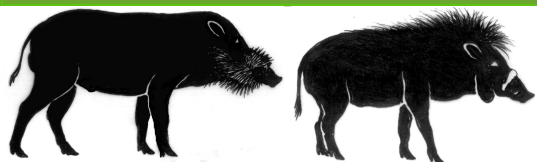
### Relevance of text by Anonymous (1770)

Surprisingly little is known about the Moluccan Babirusa *Babyrousa babirussa* despite the fact that this animal was first described by Europeans in 1582 (Macdonald et al., 2016). Most of the research on the biology of the animals of the genus *Babyrousa* has been conducted on animals from, or descended from those on, the island of Sulawesi, where *Babyrousa celebensis* occurs (Macdonald, 2017). A recently rediscovered book (Anonymous, 1770), published by Jan Monterre in 1770 and republished in Afrikaans as Anonymous 2011, contains information about this poorly known Babirusa; the chapter on the 'Babi-Roesa, Varkens-Hert' was compiled by an unknown author, and as acknowledged, is largely derived from the book by Valentijn (1726). The latter has been said to contain the observations collected by Georg Everhard Rumphius for his unpublished books 'concerning Land-, Air- and Sea animals of these islands' (Beekman, 1999). The general quality and accuracy of the observations in the manuscript indicate that the original author was well-informed, and this gives a sense of reliability to this historical information. Importantly, this 246 year old book chapter provides us with a glimpse of a past when apparently the Moluccan Babirusa was still very common.

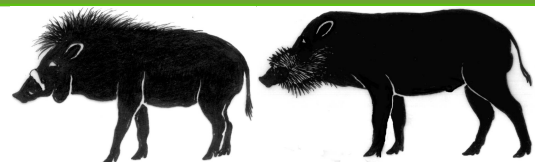
Moluccan Babirusa are presently listed as Vulnerable on the IUCN Red List of Threatened Species; in fact we know extremely little about this species and it is currently a conservation concern. It is understood to occur on the Indonesian island of Buru and on two of the Sula Islands (Mangole and Taliabu); available evidence suggests that it is now extinct on the islands of Sanana (officially Sula Besi) and Lifamatola (Meijaard et al. 2011). A survey of the north of Buru, conducted in 1990, suggested that the population of Babirusa was low and unevenly distributed (Tjiu and Macdonald, this issue). No more recent surveys, specifically focusing on determining the presence, absence and abundance patterns of the species have been conducted. However, anecdotal information suggests that it is now very rare (Eaton & Hutchinson 2015, Pattikawa, personal communication). Little is known about the Moluccan Babirusa's current habitat use; on Buru, the local Rana people report that Babirusa are most often found in hilly areas and in the mountains, where they use rocky areas.

The translated text below provides quite a different, earlier, picture suggesting that the species used to be 'plentiful' on Buru; this included the lowlands around Kajeli Bay in the north east of the island (Figure 2), where the species has not been sighted for some years. All of the information available from the last few decades indicates that the species now occurs only in the remotest parts of Buru. Hunting, forest loss, gold mining and human population migration and growth appear to be the major causative factors. Over-hunting of Babirusa has been well-documented on





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Sulawesi (Blouch, 1990; Lee et al, 2005; Milner-Gulland & Clayton 2002; Suhari 2013).

The study of historic manuscripts thus still plays a valuable role in species conservation as it provides insights into behaviour and abundance of species at the time when you had few threats.

## Translation

Page 44–49.

Description. Plate V. number 9. Babi-Rusa, Pig-Deer

The animal depicted on this plate number 9 is a very strange and little known creature; it is only, as far as we know, found on the island of Buru, and some other islands thereabouts. François Valentijn who saw the animal himself and had it drawn from life, gives the following description:

In Malay it is named the Babi-Rusa, or Pig-Deer because it seems to be a mixture of both animals.

It almost has the appearance of any other wild pig, but the male has something different about it, that other male wild pigs, or boar, don't have; because apart from the two tusks protruding from the lower jaw, as in almost all other wild pigs, it has two more on the upper jaw, opposite the others, curved backwards, almost into a half-circle, and some curled even further; giving this animal a rather handsome [could also be translated as peculiar, or kind/not-mean. Eds]

appearance. Occasionally the tusks curl so far back that they begin to grow into the forehead bone.

Apart from these it has, in the top part of its mouth, also four incisors, and in the bottom part, six others, of which the two furthest back lie flat and point forwards, after which, instead of canine teeth, it has the aforementioned protruding teeth; behind these six molars can be counted on each side, of which the furthest back are divided into three cusps.

The female does not have the large projecting teeth.

This animal has a thin and weak skin, with short hair, that is quite soft. It also doesn't have a long mane on the back, such as other wild pigs.

They are almost ash-grey in colour, although with a ruddy hue, mixed with some black through the base colour. The head is more pointed than that of other pigs. The ears are quite short, and the eyes small; also the tail is longer than that of other wild pigs; having a little tuft on the end.

On each leg there are two long and two short

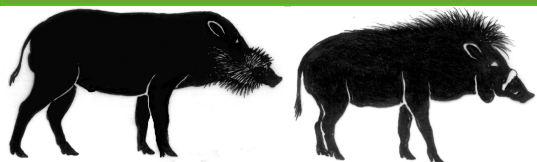
hooves, but the fore limbs are shorter than the hind limbs, which is why it has quite a slow gait, as Valentijn remarked to have seen himself.

They are easy to hunt, and during the hunt easy to get, because their skin is so thin that it can be seen through the hair and it means the dogs are usually quickly into the meat. It is true that they can do a lot of harm with the lower tusks; but the upper tusks, which are too curved, prevent them from doing harm to the dogs. This is also the reason why a dog, once it has the scent of a



Fig. 1. Plate V number 9 depicting the Buru Babirusa in Anonymous (1770). The image is a modified copy of the illustration in Valentijn's book, and it is indicated that this was the work of Theodorus van Brussel.





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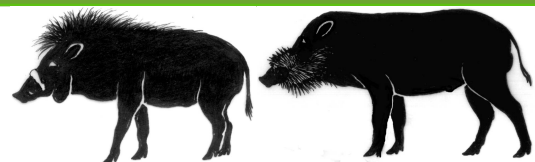


Fig. 2. Carte de l'Isle de Bouro / Kaart van 't Eyland by Boero J.v. Schley. Ca. 1753. The Bay of Cajeli is indicated.

referring to the genus *Canarium*]; it only eats grass or leaves of the Waringin tree (Weeping fig, *Ficus benjamina* Eds.) and other wild trees.

One does not need to fear that Babirusa, like other pigs, destroy gardens, root through fences, and spoil seedlings and planted crops, because it feeds primarily on tree leaves and doesn't cause any harm.

This animal is plentiful on the island of Buru, and is often obtained by soldiers in the Bay of Cajeli [near present-day Kajeli and Masarate, see Figure 2, Eds.], who very often hunt and easily catch them. They are also found on the Xoelasche islands [i.e., the Indonesian Sula Islands, Eds.], and especially on Xoela Mangoli [Pulau Mangoli, Eds.], Bangay [Pulau Banggai, off the east coast of central Sulawesi, Eds.], [and on] the [north] east coast of Celebes [Sulawesi, Eds.], and especially around Manado.

Although there is now on Buru an abundance of wild pigs, which, because the Muslims do not eat pork, are flourishing, one does not see them mix with Babirusa and the Babirusa always keep themselves away from other wild pigs.

When dogs hunt Babirusa, and the latter tire, they save themselves by running as quickly as they can towards the ocean where they can lose the dogs by their ability to swim fast and cunningly dive into the water (as well as any duck can). Thus they often outwit dogs.

The pigs can thus swim for a very long time, even between one and another island.

People have tried to keep such an animal and feed it with rice and Batata's [sweet potato, *Pomoea batatas*. Eds.] leaves, but with a lot of difficulty to keep them alive. Though I (says Valentijn) saw one at the time of Mr Padbrugge who had one at his place and which was brought up in this way.

People keep the heads of these animals. Because of the unusual shape of the teeth, and they send them as rarities to the Fatherland, where one can find them with this or that collector of rarities.

An enthusiast on Ambon also reared a Babirusa for a long time and habituated it to recognize its name, so that when the children called it by its name, it would come and when one scratched it on its back, it would allow the children to sit on top of it.

This animal ate *Canari*, rice, padi, and especially liked fish, including the guts.

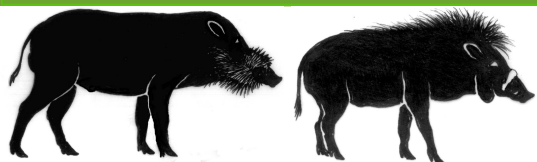
Babirusa, doesn't let go of it, and won't easily start following another wild pig.

This animal has a strong sense of smell. Quite often it stands on its hind legs against a tree, in order to smell if predators are near. It often sleeps upright in this position at night to ensure that it has the best scent of its surroundings. Sometimes hunters find them like this. It is also common for them to use their curved upper tusks to hook onto branches and vines to hang so they can sleep easier.

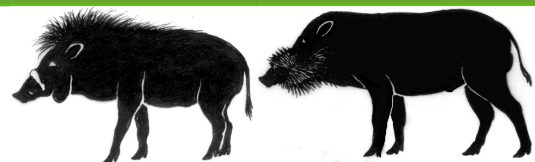
The meat from this animal is closer to venison in both taste and fineness than to pork. The meat is also very lean, with little fat so that most of it is meat.

The diet of this animal is not the same as that of other wild pigs, which eat *Canari* [Eds.: probably





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This animal was also ruddier and blacker than usual, with a more curly hair that resembled wool, but not smelling as strongly as the wild ones do.

One doesn't hear many sounds from this animal, although if it does make a sound it most closely resembles the grunting of pigs. Now that we have discussed the land animals, we will now continue with the fish and water animals.

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