

# *Siebenrockiella crassicollis* Trade Using Marketplace in Indonesia

Quinzy Varira Tartusi\*, Nia Kurniawan\*\*, Amir Hamidy\*\*\*

\* Magister Program of Biology, Faculty of Mathematics and Natural Sciences, University of Brawijaya, Malang, East Java, Indonesia

\*\* Department of Biology, Faculty of Mathematics and Natural Sciences, University of Brawijaya, Malang, East Java, Indonesia

\*\*\* Museum Zoologicum Bogoriense, Research Center for Biology - The Indonesian Institute of Sciences (LIPI), Bogor 16911, Indonesia

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**Abstract-** *Siebenrockiella crassicollis* is one of the most demanded freshwater turtle in the international market. Being indexed in Appendix II CITES and categorized as Vulnerable by IUCN, the trade of this species is regulated by the authorities in Indonesia. Being also traded in marketplace in Indonesia, it is important to monitor the online trade of this native species to achieve the legal, traceable, and sustainable wildlife trade. The result showed that *S. crassicollis* was traded in Five marketplaces. These shops were distributed in several province in Sumatra and Java, with the most number of shops found in DKI Jakarta. The size of turtle traded were vary, and the most various price found in shops located in DKI Jakarta. The trade of *S. crassicollis* on the marketplace seems to still not fulfill the three trading principles. Some recommendations are proposed based on the findings in this research.

**Index Terms-** Marketplace, *Siebenrockiella crassicollis*, trade

## I. INTRODUCTION

This Wildlife trade is an important aspect of the economy in Southeast Asia. Traded wild animals are used in a variety of needs, such as foods, medicines, pets, displays, clothing and even household items [1–4]. Among other classes, the reptile class ranks second with the most species reported in trade, after the bird class [5]. The International Union for Conservation of Nature (IUCN) has included *S. crassicollis* in the Vulnerable (VU) category, which is a species that is at risk of extinction in the medium term and is at risk of becoming Endangered (EN), while according to Rhodin, globally *S. crassicollis* has entered the EN category [8, 10]. In 2003 this species was officially categorized in Appendix II by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which means that this species is not yet rare, but has the potential to become rare if trade is not controlled. In the international market, *S. crassicollis* meat is in demand for consumption and its carapace is used as ingredients for Traditional Chinese Medicine (TCM). Indonesia is one of the main countries exporting *S. crassicollis*. In domestic market in Indonesia, *S. crassicollis* is traded as pets. However, the extent and magnitude of the trade in Indonesia is unknown.

Trade using internet has grown rapidly throughout the world. Online trade is increasingly popular because besides being easier to access, it also provides various kinds of human needs, not only clothing, medicine, food, services, but also animal trade [6, 7, 9, 11, 12]. According to a survey conducted by the Indonesian Internet Service Providers Association (*Asosiasi Penyedia Jasa Internet Indonesia*, APJII), the number of internet users in 2018 reached 171.2 million, an increase of about three times the number of internet users in Indonesia in 2012 [13]. This shows that around 64.8% of the Indonesian population has been actively using the internet, so that trading activities via the internet have also bloomed in Indonesia. Even Indonesia, with its rich biodiversity, does not excluded from animal trade through online stores [14–16]. Turtles are one of the most common groups of creatures found on the online market. Usually, turtles are traded as pets. However, there still lack of information about the wildlife trade in marketplaces in Indonesia. Evaluation of turtle trade can be carried out using a variety of methods such as interviews with trade intermediaries, studies at harvesting sites, visiting captivity sites, literature inventory from the internet and market surveys. Apart from conventional markets, currently turtles are also traded in Indonesia through the internet market. Online trading can be done through forum / community pages, web pages, social media, or marketplaces. Ease of access and confidentiality of identity are driving forces for illegal wildlife trade via the internet. The purpose of this study was to evaluate the trade of *S. crassicollis* in marketplaces in Indonesian.

## II. RESEARCH METHOD

*S. crassicollis* Online trade data was collected for three weeks in January 2020. The search was carried out with the search keywords of “kura pipi putih” (white-cheeked turtle) and “kura piput” (stand for pipi putih) using search engine Google (google.co.id). Furthermore, the search using those keyword was conducted in the marketplace. The data recorded were the name and location of the shop, the price of the turtle and the size of the turtle being sold. If possible, the seller was interviewed to obtain the information about the supplier location and the volume of turtle stock using the chat room provided by the marketplace. The result was analyzed descriptively, presented in pie chart and bar chart. There was no turtle bought in this research.

### III. RESULTS AND DISCUSSION

#### A. The Platforms of The Trade

Traces of the online turtle trade in Indonesia have been observed in 2008 and 2011 [17, 18]. However, in those years, trading mostly used online forums and website addresses, among them were hewanpeliharaan.com, jakartapets.com, and noafgan.com. Communication between sellers and buyers was done using electronic mail, Yahoo masanger or mobile communication media. Currently the turtle trade is no longer found on the sites concerned and even some sites in these studies are no longer accessible, and the trade have switched to social media platforms and marketplaces. Based on the results of this study, several marketplaces in Indonesia that provide *S. crassicolis* (Figure 1).

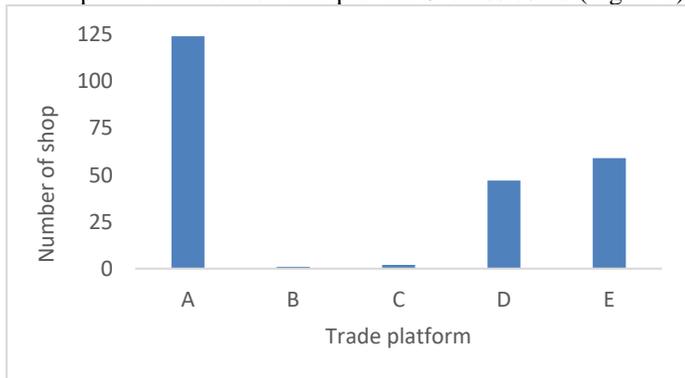


Figure 1. Number of *S. crassicolis* shop in marketplace

*S. crassicolis* sellers were mostly found in platform A (n = 124), then platform E and D. platform A and E are one of the unicorn startups in Indonesia, namely a pioneer category with an investment value of up to 1 trillion rupiah and a marketplace with the highest sales rate [19, 20]. Platform A is a marketplace in Indonesia founded in 2010, then platform B is a marketplace launched on August 2009, while platform D is a marketplace that was founded in Singapore in 2015 and operates in several countries such as Singapore, Malaysia, Thailand, Vietnam, Indonesia, Philippines, Taiwan, and Korea. The three main marketplaces have indeed occupied the top five marketplaces based on smart phones and websites in Indonesia for the last three years. Platform C was originally an online community forum, but along with the development of community users, it provided a trading platform for the users to advertise their selling products. Meanwhile, platform B is a marketplace for buying and selling new and secondhand products. The platform, which was established in 2012, apart from operating in Indonesia, it also operates in Australia, the Philippines, Hong Kong, Canada, Malaysia, New Zealand, Singapore and Taiwan.

#### B. Online stores location

Animal trade carried out through a separate website makes the location of a shop or seller difficult to identified because there is no location information, and communication between traders and sellers is more closed [17]. But now the marketplace requires every store to inform the location of the store, so that the system makes it easier to estimate shipping costs. Based on observations,

online stores selling *S. crassicolis* were spread across ten provinces in Indonesia, namely North Sumatra, West Sumatra, Jambi, Lampung, Banten, DKI Jakarta, West Java, Central Java, DI Yogyakarta and East Java (figure 2). The highest number of online shops was found in DKI Jakarta (n = 199), with the platform most used being platform A. Overall, the highest number of stores was found on the platform A, but platform E was the platform with the most users spread across the islands of Java and Sumatra.

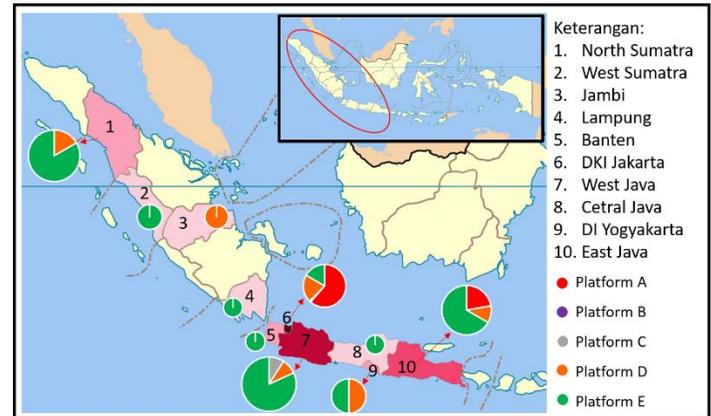


Figure 2. Locations of *S. crassicolis* online sellers in Indonesia

Several sellers in the marketplace said that they got their *S. crassicolis* stock directly from Borneo and Sumatra. Although the island of Borneo is one of the locations for harvesting *S. crassicolis* and local trade occurs, no turtle sellers were found in the marketplace. Jambi and North Sumatra are also one of the locations for harvesting *S. crassicolis*, however only a total of 7 online shops were found in both locations. On the other hand, given the densely populated human population on the island of Java, its relatively central location and long-established trade routes with other islands, and with animal markets found in nearly every major city, it was not surprising that much of the online trade in wildlife also appears to be focused on the island of Java.

#### C. Size of *S. crassicolis* traded

The online shops provide a description of the conditions *S. crassicolis* being offered. The information provided was not the same in every shop, some examples of information provided are turtle size, abrasion shell condition, feed information, care methods, ideal aquarium conditions. Based on the description of the size of the turtles being sold, as many as 10% of shops provided *S. crassicolis* with sizes less than 11 cm, 20% of shops provided sizes of 11 to 15 cm, then 35% of shops provided sizes that were more than 15 cm, while 35% of shops did not list description of the size of *S. crassicolis* offered (Figure 3).

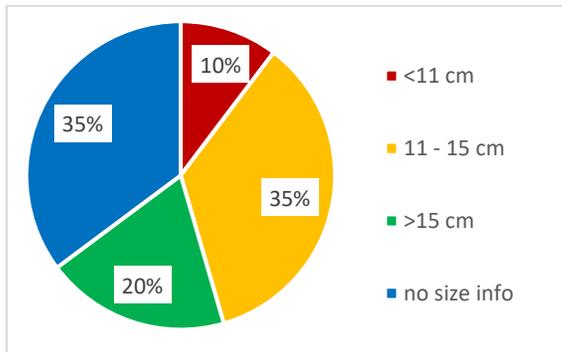


Figure 3. The size of *S. crassicolis* traded

The finding of *S. crassicolis* deals measuring less than 11 cm indicated that the turtles being sold were still in the juvenile phase. Previous research conducted in North Sumatra and Jambi stated that turtles measuring more than 15 cm or the adult phase were harvested for the purpose of community consumption, while turtles measuring less than 11 cm or juvenile harvested were destined for consumption and domestic needs [21]. In online trading through this marketplace, it still unclear about the use of *S. crassicolis* whether for consumption or pet needs.

#### D. The prices

The price of *S. crassicolis* at the harvesting location in Borneo was in accordance with the recommendation or price benchmark given by the Minister of Environment and Forestry of the Republic of Indonesia in regulation No. P86 / MENLHK / SETJEN / KUM.1 / 11/2016, namely IDR 20,000 for the domestic market [22]. However, these prices will change when offered by sellers outside the region, due to transportation costs and turtle care, as well as profits for sellers. The offering price of *S. crassicolis* on the marketplace platform varies widely, depending on body size and online market location, however, there are also many shops that offer turtles of the same size and shop location but the bidding price was far above average. Price competition in the internet market was different from conventional markets. In the marketplaces, it would be very easy for prospective buyers to compare prices, in fact almost all marketplaces also provide store filtering options so that potential buyers can choose a price range, store location, store reputation, payment method, and so on. Meanwhile, the turtle was traded in the conventional market, the price difference would not be too far away, and the stall competition will not be too tight.

Price variations based on store locations were mostly found in online markets that located in the province of DKI Jakarta, with a price range of IDR 53,000 to IDR 525,000 (figure 4). The highest prices are only at two shops but there was no description of the size of the tortoise. It was estimated that from the pictures provided, the tortoise is a adult tortoise. The most common price for turtles offered in DKI Jakarta is IDR 140,000 rupiah, which was for the turtle sizes ranging from 18-20 cm. In West Java the price ranged from IDR 60,000 to IDR 350,000 with the most frequently offered price of IDR 150,000 per individual. In East Java and Banten the most frequently offered prices were IDR 135,000 and IDR 100,000, respectively. The prices in North Sumatra and DI Yogyakarta were different from each store so it

was not possible to determine the price that is most often offered. While in Banten, Jambi, Central Java, Lampung and West Sumatra, only one store was found that provided *S. crassicolis*, so there was no price variation.

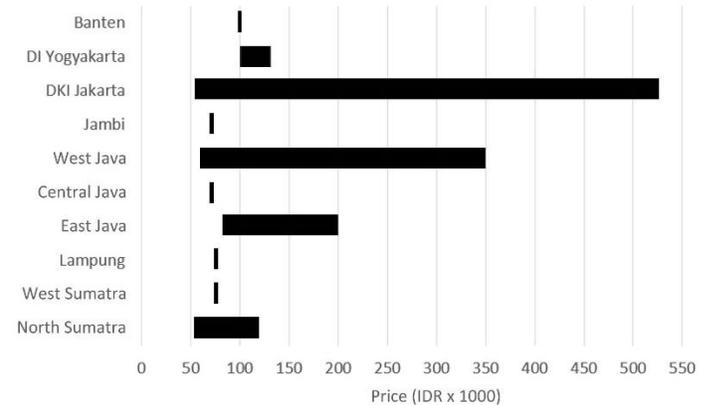


Figure 4. Price variation of *S. crassicolis* based on shop location

The transition in the turtle trade, which previously used a special website page and then currently used the marketplaces, can be caused by the website having hosting and domain costs that must be paid by the website owner annually so that the website can be continuously accessed. Thus, even though there are no buying and selling transactions, the website owner still has to pay a subscription fee for the domain. Whereas in the marketplace, sellers don't need to pay anything to open a shop and display the products to be sold. However, the results of successful transactions will be cut by a few percent for the marketplace. This is certainly quite beneficial for sellers in the marketplace compared to selling using a separate website.

The marketplace were preferred most likely because of the joint account system, where the buyer must first make payments to a joint account in the marketplace (the marketplace as a third party), and the money will not be channeled by the marketplace to the seller before the product's arrival was confirmed by the buyer. In addition, the buyer can also request a return of products or cancellation if the item sent is damaged or does not match the order, then the money will be returned to the buyer. This system is very helpful in reducing cases of fraud in online trading, so it can be assumed that people prefer to transact through the marketplace rather than through websites that do not have such a secure transaction system.

In addition, the advantage of the marketplace compared to websites and social media is that the marketplace provides store rating features and reviews from buyers, so that potential buyers can consider the product credibility and service performance of the store. According to a research using platform E, ratings and reviews on the marketplace were very positively correlated with consumer purchase intentions [23]. On websites and social media, buyers may not necessarily be able to submit reviews of the products or services provided by the seller, so new prospective buyers unable to know the performance or credibility of the store.

The trading activity of *S. crassicolis* as a pet on several marketplace platforms in Indonesia indicated the need for further study. Several marketplaces have made policies regarding which products or goods cannot be sold through their platforms through the "seller education center" menu owned by each marketplace. The marketplace has also provided a "report a product" feature that makes it easy for users to report products that violate policies that have been made. If the product is proven to violate the policy, then the product will be blocked or not displayed on the marketplace, and certain sanctions will be imposed on each marketplace.

Platform A, B and E have banned the sale of pets on these platforms, however, many sellers offer *S. crassicolis* through these platforms (Figure 5). The results of the study indicated a number of shops selling *S. crassicolis* at platform A, B and E are 124, 1, and 59 stores, respectively. Violations of these platform policies can be caused by a lack of knowledge of sellers and buyers about product policies that can be traded through these platforms, thus the sellers continue to advertise pets, and buyers also keep buying and not reporting the product. These findings may also indicate a lack of review process by the platform providers of the products sold by users.

24. Barang mistis;
25. Penjualan benda yang tidak bergerak seperti tanah, rumah, dan sejenisnya;
26. Segala jenis hewan peliharaan;
27. Pembuka kunci dan penunjang tindakan perampokan/pencurian;
28. Otomotif (mobil dan motor). Kecuali terdapat kerja sama resmi dengan Bukalapak;

Figure 5. Policy of prohibited item in Platform A. No 26."All kinds of pet"

Several marketplaces operating outside Indonesia, such as Shopee Singapore (Shopee.sg), Shopee Malaysia (shopee.com.my), and Lazada Philippines (lazada.com.ph) have stipulated a policy to prohibit the trade of various kinds of animals, both pets and wild animals as well as the product. Even Amazon (amazon.com) and Ebay (ebay.com) make a fairly detailed list of what animals are allowed and prohibited. This policy was created as a form of concern for animal welfare and protection of local species and endangered species. This is of course related to the process of sending animals if they are traded online and must be sent to a city that is quite far away, but the seller does not pay attention to the safety and comfort of the turtles being sent so it can have an impact on the turtle's condition.

The volume of turtles traded through the marketplace was quite difficult to record and monitor, allowing exploitation that exceeds the domestic use quota. One seller at the marketplace stated that in one shipment of *S. crassicolis* stock from Borneo, up to 100 turtles can be shipped. To realize the legal, traceable and sustainable trading principles of *S. crassicolis*, trade volume in the marketplace can be circumvented by creating a system to restrict turtle buying and selling transactions that can be done through the marketplace, so transactions in the marketplace will not be successful when it reaches the volume limit. In addition, it

is necessary to make a policy in the form of turtle traders needing to include a document for transporting domestic wild plants and animals (SATS-DN) which should be owned by the sender of turtle stocks in the harvesting area to reduce illegal shipping actions from the turtle harvesting area. Sellers who do not have this permit are not allowed to sell turtles in the marketplace. In addition, marketplaces that have established policies on the prohibition of pet trade need to provide more effective education for users regarding policies on prohibition of animal products, so that marketplace users or buyers can contribute if there is a policy violation so as to create an online trade ecosystem that supports wildlife conservation.

#### IV. CONCLUSION

The trade of *S. crassicolis* in the marketplaces showed a shift in the market platform from previously using a separate website to using the marketplace as a trading platform. There were five marketplace platforms that provide *S. crassicolis*. The locations of online stores are spread across the islands of Java and Sumatra, with the largest number of stores being found in Jakarta. Price variations are mostly found in Jakarta in the range of Rp. 53,000 - Rp. 525,000. The trade of *S. crassicolis* through marketplaces in Indonesia showed that the trade has not met the principle of trade, thus still need further monitoring and adjustment in trade policies, to accomplish a sustainable *S. crassicolis* trade.

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#### AUTHORS

**First Author** – Quinzy Varira Tartusi, Magister Program of Biology, Universitas Brawijaya. Email:

quinzy.varira@gmail.com.

**Second Author** – Nia Kurniawan, Department of Biology, Faculty of Mathematics and Natural Sciences, Universitas Brawijaya. Email: wawan@ub.ac.id

**Third Author** – Amir Hamidy, Senior researcher of Museum Zoologicum Bogoriense, Research Centre for Biology, Indonesian Institute. Email: hamidyamir@gmail.com

**Correspondence Author** – Quinzy Varira Tartusi, Magister Program of Biology, University of Brawijaya. Email: quinzy.varira@gmail.com.