

"Life finds a way", a reflection on the smuggling of a living fossil of Borneo the Earless Monitor. Lanthanotus borneensis Steindachner, 1878 (Squamata: Lanthanotidae) in Indonesia

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The Borneo Earless Monitor *Lanthanotus borneensis* Steindachner, 1878 is enigmatic, and poorly-known species, and considered the sole living representative of the family Lanthanotidae (Das, 2013; Das & Auliya, 2021). This species is endemic to the island of Borneo, where it has been confirmed in the Malaysian State of Sarawak; and the Indonesian provinces of West and North Kalimantan (Das, 2004; Yaap et al., 2012; Vergner, 2013; Uetz et al., 2001). No fossil materials of *L. borneensis* have been found, but a related Lanthanotid from the Cretaceous 75 million years ago of the Gobi desert (Mongolia) was named *Cherminotus* (Pianka 2004). *Lanthanotus borneensis* inhabits lowland localities below 400 m

elevation in forests with clear and rock streams; and has also been reported from agricultural lands (such as palm oil plantation), but only in the vicinity of forests with good canopy cover and freshwaters (Das & Auliya, 2021; Stoner & Nijman, 2015; Langner, 2017). Small rocky hill streams within forests or in dense vegetation with good canopy cover are potential habitats for *L. borneensis*, based on the observation of this species in small streams in West Kalimantan at night or during daylight (Arida et al., 2018).

"Life finds a way" is a famous quotation of a character from the 1993 Hollywood production, Jurassic Park, Dr. Ian Malcolm, who describe several of lizard species where its females have the ability of parthenogenetically 'self_breeding', while they had not found any potential male for mating (Arif, 2016). In his book, "Life Finds a Way", biologist Andreas Wagner reveals the deep symmetry between innovation in biological evolution and human cultural creativity (Wagner, 2019). Until recently, *L. borneensis* was one of the greatest herpetological rarities that only known from isolated localities in Borneo, but it is surprisingly since the last decade, that the species have appeared on sale online, with a high demand and is currently on display at several zoos in Japan, Hong Kong, Europe and USA (Stoner & Nijman, 2015; Rehak et al., 2019; Jumle & Badola, 2020; Nijman, 2021). Despite being protected in three countries of its range states of Indonesia (Kalimantan), Malaysia (Sarawak), and even Brunei Darussalam (where the species has not yet been recorded), the lack of regulations protecting the species in consumer states enables international trade (Auliya et al., 2016). Due to its rarities in the wild, we report and summarize smuggling of *L. borneensis* in Indonesia in recent years, to illustrate how local hunters and sellers finds a way to ship this lizard abroad.

Records of smuggling of *L. borneensis* were compiled from available information, particularly from local media and social media in internet sources. There are 10 reports of smuggling of *L. borneensis* in Indonesia during 2015 to 2022 as summarized below:

- On 12 October 2015, a German citizen was arrested at Soekarno Hatta Airport by Indonesia National Police in Jakarta while trying to carry eight *L. borneensis* hidden in his body. Eight *L. borneensis* were bought from West Kalimantan for Rp. 50,000 perindividual (c. \$4), so the perpetrators paid Rp. 400,000 (c. \$32) in total to get them; the concerned individual brought *L. borneensis* to Jakarta via Supadio International Airport, West Kalimantan (Arwan, 2015; Felisiani, 2015).
- On 14 March 2016, the Natural Resources Conservation Agency (Balai Konservasi Sumber Daya Alam or BKSDA) West Kalimantan Province managed to secure 17 individuals of *L. borneensis* at Supadio Pontianak International Airport which will be sent via a delivery service with the aim of Batam (Riau Province, Sumatra). The method used to smuggle *L. borneensis* was to pack the lizards in a plastic box, he box is put into a cardboard box of instant noodles. In order to deceive the officers, the smugglers use false sender and receipient information (Aditya, 2016; Sudirmansyah, 2016).
- On 16 May 2017, a Japanese man has been arrested by Avian Security and Soekarno Hatta Airport's Agricultural Quarantine Agency while transiting in Jakarta's International Airport after being found to be traveling with four suitcases and a box containing a total of 253 reptiles, including four *L. borneensis* (Adi, 2017; Kitade & Naruse, 2020).
- On 7 November 2017, the Natural Resources Conservation Agency of West Kalimantan Province managed to secure one *L. borneensis* (Murdaningsih, 2017; Putra, 2017).
- On 16 January 2018, the Forestry Police for cargo delivery at Supadio Airport and the Natural Resources Conservation Agency of West Kalimantan Province have managed to secure delivery of one *L. borneensis* and orchids being sent abroad (from Pontianak to Pematangsiantar, North Sumatra) using express courier services (Andilala, 2018).

- On 24 and 25 April 2018, wildlife team of the Natural Resources Conservation Agency of West Kalimantan Province has managed to secure delivery of one *L. borneensis* and orchids being sent to Pematangsiantar (North Sumatra) using express courier services (Andilala, 2018).
- The wildlife team of the Natural Resources Conservation Agency of West Kalimantan Province has been failed delivery of *L. borneensis* via the delivery service at Supadio Airport: two individuals on 24 April 2018, and eight individuals on 25 April 2018 (KSDAE, 2018).
- On 17 May 2021, Avian Security and Supadio Airport's Agricultural Quarantine Agency have been failed delivery of four *L. borneensis* and a box of Pitcher plants *Nephentes* sp. which will be send via the delivery service at Supadio Airport (Anon, 2021).
- On 26 April 2022, the Borneo Trans Mandiri (an autobus transportation company) and the Natural Resources Conservation Agency of West Kalimantan, thwarted 10 *L. borneensis* in two boxes of food to be sent to Medan, north Sumatra (Eno, 2022).
- On 6 July 2022, the Indonesia National Police of Kubu Raya District of West Kalimantan and Borneo Trans Mandiri thwarted four *L. borneensis* in two boxes of food to be sent to Java (Fig. 1; Adi, 2022).

In Indonesia, *L. borneensis* has been listed as protected species under the Second Amendment to the regulation of the Minister of Environment and Forest Number P.20/MENLHK/SETJEN/KUM.1/6/2018 regarding protected species of plants and animals (Ministry of Forestry and Environment, 2018). However, smuggling of *L. borneensis* always found every year between 2015 to 2018, absent in 2019 to 2020, and recorded again in 2021 to 2022. The discontinous smuggling records of *L. borneensis* in 2019 to 2020 could be impact of Covid19 pandemic, where all Indonesian provinces were quarantined and shipping restricted. Our monitoring on social media and internet sources found that *L. borneensis* is also kept as pets by reptile hobbyists in some cities in Indonesia, including Payakumbuh (West Sumatra), Bandung (West Java), Jakarta, Malang (East Java), Surabaya (East Java), Kumai (Central Kalimantan), Bontang (East Kalimantan) and Banjarbaru (South Kalimantan).

Regular records of smuggling of L. borneensis from 2014 to 2022 suggest that this species likely still has good population in certain habitat within its distributional range. Based on a Youtube channel about expedition of L. borneensis in Western Kalimantan (Panji Petualang, 2019), local people explained this species (locally called "kadal duri" or "kadal bisu"), usually found when they go hunting mammals at night, and not move when approached. Langner (2017) reported that when detected, L. borneensis remain motionless "frozen" on the ground in the head torch beam. Based on these behaviours, it is clear L. borneensis relatively easy to caught in the wild. An investigation to learn about hunting and trading of L. borneensis in West Kalimantan found that hunting involve local people and middleman (reseller) who will manage to ship this species abroad (Arida et al. 2018). This investigation suggest local hunters known exact localities of L. borneensis, and keep these secret. Nuwer (2018) reported that almost L. borneensis available for sale on social media and reptile forums since 2012 no doubt originated from Indonesian Borneo, where an investigation indicate collectors regularly travel there, and local villagers are eager to supply them. It is no wonder that in 2015 and 2017, a German and a Japanese national were arrested at the Soekarno Hatta International Airport in Jakarta for attempting to smuggle L. borneensis out of the country, reportedly purchased from Kalimantan (Arwan, 2015; Felisiani, 2015; Adi, 2017; Janssen & Krishnasamy, 2018; Kitade & Naruse, 2020).

Our findings suggest that smuggling of *L. borneensis* in Indonesia were collected from West Kalimantan Province. It is clear this Province needs to take action for its conservation. Key institutions who prevent smuggling of *L. borneensis* in Indonesia are Natural Resources Conservation Agency, Airport's Agricultural Quarantine Agency, Avian Security at airports, Indonesia National Police as well as private

sectors (Borneo Trans Mandiri, an autobus transportation company). Regarding conservation actions in place for *L. borneensis*, Das & Auliya (2021) suggest locality records and relevant sites where the species occurs need to be monitored and managed, particularly in protected areas, park staff needs to control illegal collecting activities. Furthermore, a prerequisite to inform and train authorities and relevant stakeholders are required in the future.

Acknowledgements

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Figures

Figure 1.

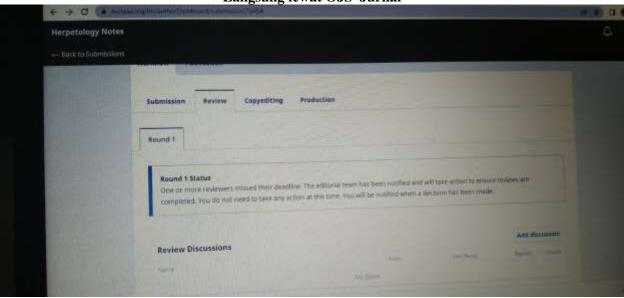


Figure 1. The Borneo Earless Monitor *Lanthanotus borneensis* have been failed to smuggling to Java by Indonesia National Police of Kubu Raya District, 6 July 2022, West Kalimanan Province, Indonesia. Photo by Adi/mabesbharindo.com.



INTRUKSI REVISI 1

Round 1 Langsung lewat OJS Jurnal



14 September 2022

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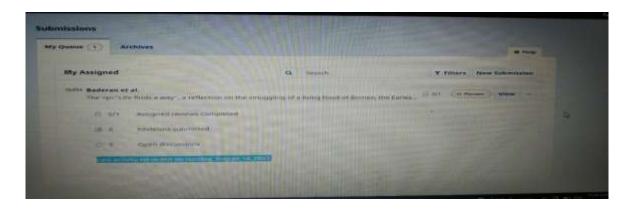
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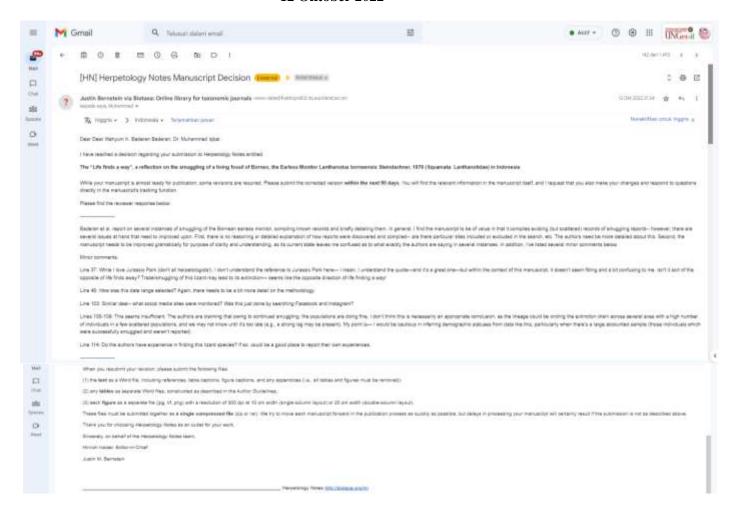


Figure 1. The Borneo Earless Monitor *Lanthanotus borneensis* have been failed to smuggling to Java by Indonesia National Police of Kubu Raya District, 6 July 2022, West Kalimanan Province, Indonesia. Photo by Adi/mabesbharindo.com.

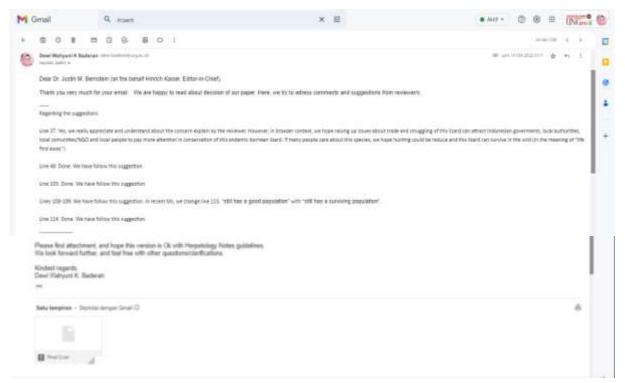
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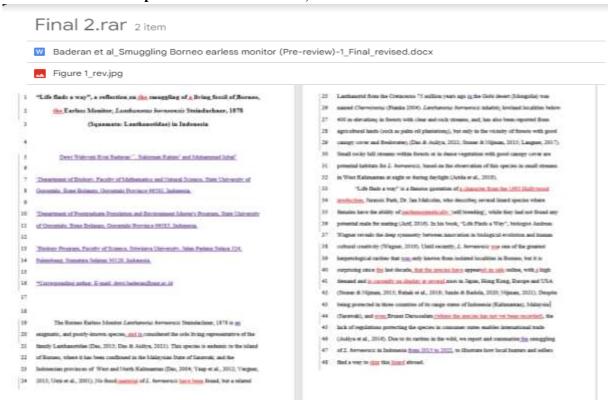
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- On 17 May 2021, Arrian Sensity and Engados Airport's Agricultural Quantition Agricy lamb been failed deliver forc 2. Remarkets and a best of Philare plans: Maybernet sp. reliated will be used via the delivery service of Engades Airport (Anna, 2022).

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103 (Alimotry of Forestry and Environment, 2010). However, carcogology of L. Bornestrick van 104 alimotry found every year housess 2015 to 2018, about from 2019 to 2020, and recorded 105 again Sun 2021 to 2022. The discontinuous transpling records of L. Bornestrick Sun 2019 to

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110 <u>finding support for </u>I. Advanced in also kept as pet, by septile bodytysts in some other in 1111 Indonesia, including Revalandosh (West Samutha), Bandang (West Inna), Jakasta, Makang

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 113 and Barjarhum (South Kalimantan).

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[38] Kalimanna, Account 2015 in Kestebarn Direct of South Kalimanna, October 2011 in

121 Katalian District of South Kalimanna, March 2019 in Banks Uts of Central Kalimanna. 122 March November 2020 in West Kalemanton, February 2021 in Kales Rava District of West 125 Kalimanian Trans 2021 in Katapung District of West Kalimanian, July 2021 in Salamana 124 District of Central Kalemanian October 2011 in Landa's District of West Kalemanian, and 125 December M23 in Seroom District of Central Kalimanna) 126 Basel on a Youtche channel about as expedition of I. Assessor in Western 127 Kalmana (Parji Petulang, 2019), local people explained this species (locally called "local 125 dust or "katal biss"), usually found when they as hunting mammals at night, and not move 129 when approached Languer (2017) reported that when detected, I. homeoccit remain. 130 motivales "Sopes" on the ground in the head torch beam. Based on these belowings, it is [3] dear I. Norwersch relatively easy to contribute wild. An investigation to learn about the 132 hunting and trading of I. Asymmetric in West Kalimantan front that hunting involve, local (3) people and a matellionan (resulter) who will manuse to skip this species abroad (Araba et al. 134 MIR). This investigation suggests local hunters know the exact localities of L. Romanocci., 135 and lessy these secret. Name: (2015) reported that almost Z. homeword available for sale on 136 social media and reptile firmum since 2012 to doubt originated from Indonesian Borneo 137 where an investigation indicates collection regularly travel there, and local villagess are exper-138 to specify them It is no wonder that in 1915 and 2017, a German and a Japanese national 139 were prested at the Sociation Harta International Author' in Talanta for attenuation to omissile 140 I. however out of the country, reportedly purchased from Kalimantan (Arwan, 2015; 141 Felisiani, 2015; Adi, 2017; James & Kristoniany, 2018; Kitale & Names, 2020). 142 Our findings suggest that the concepting of Z. hornested in Indonesia were collected.

Our finding, suggest that the consequence of L homework is Indonesia were collected.
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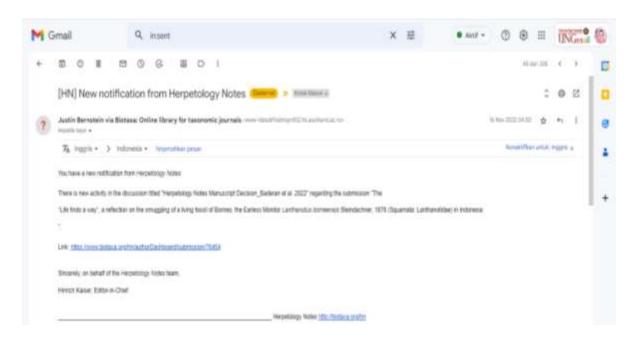
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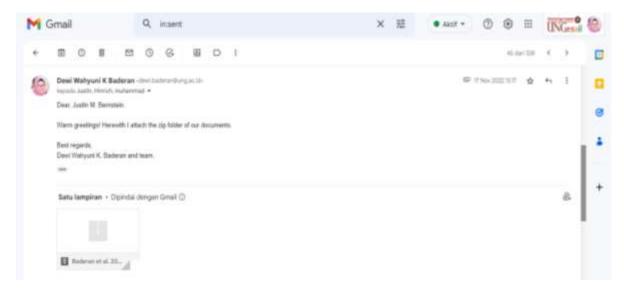
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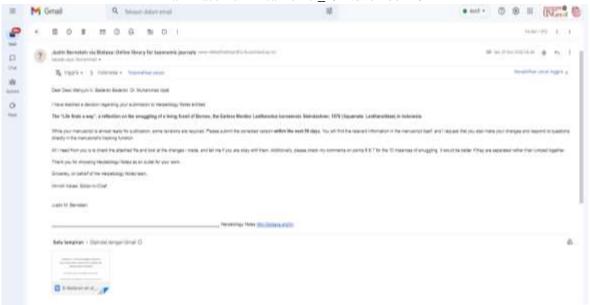


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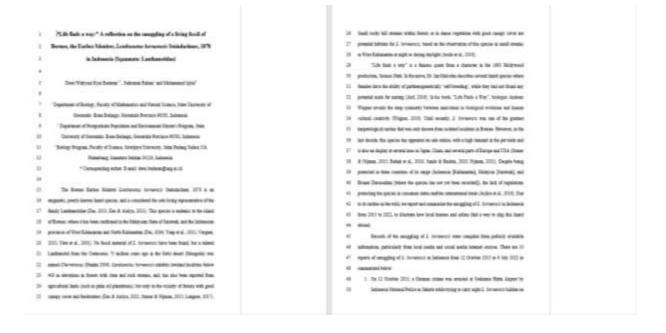


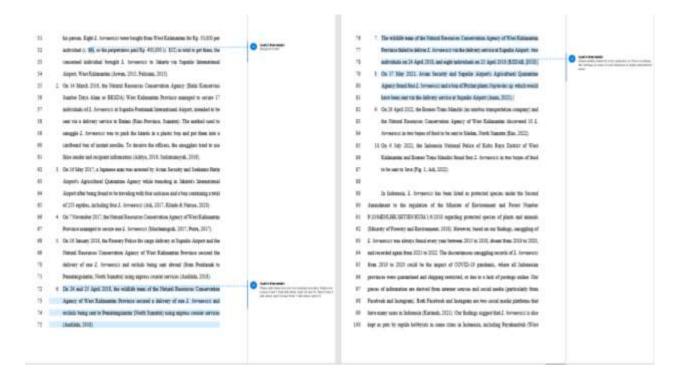
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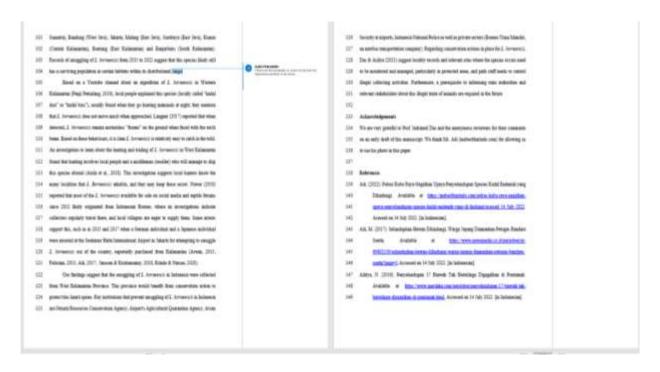
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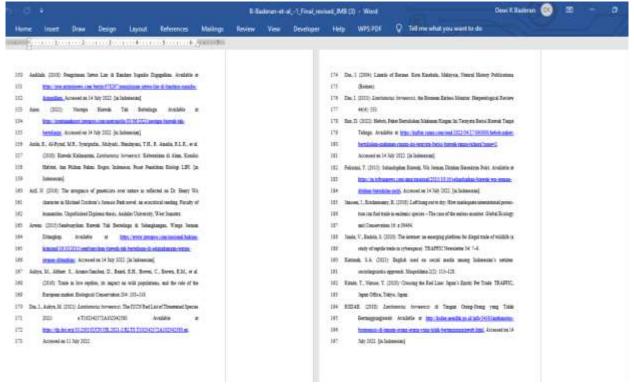


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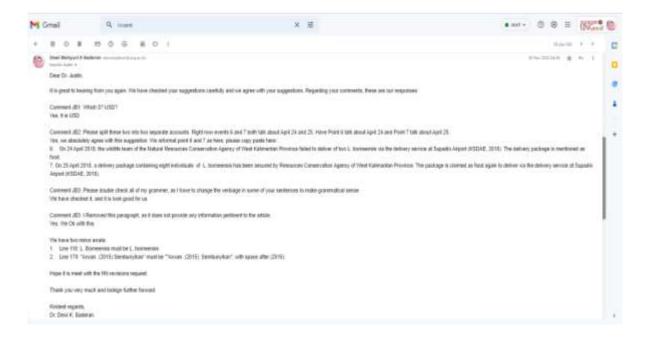


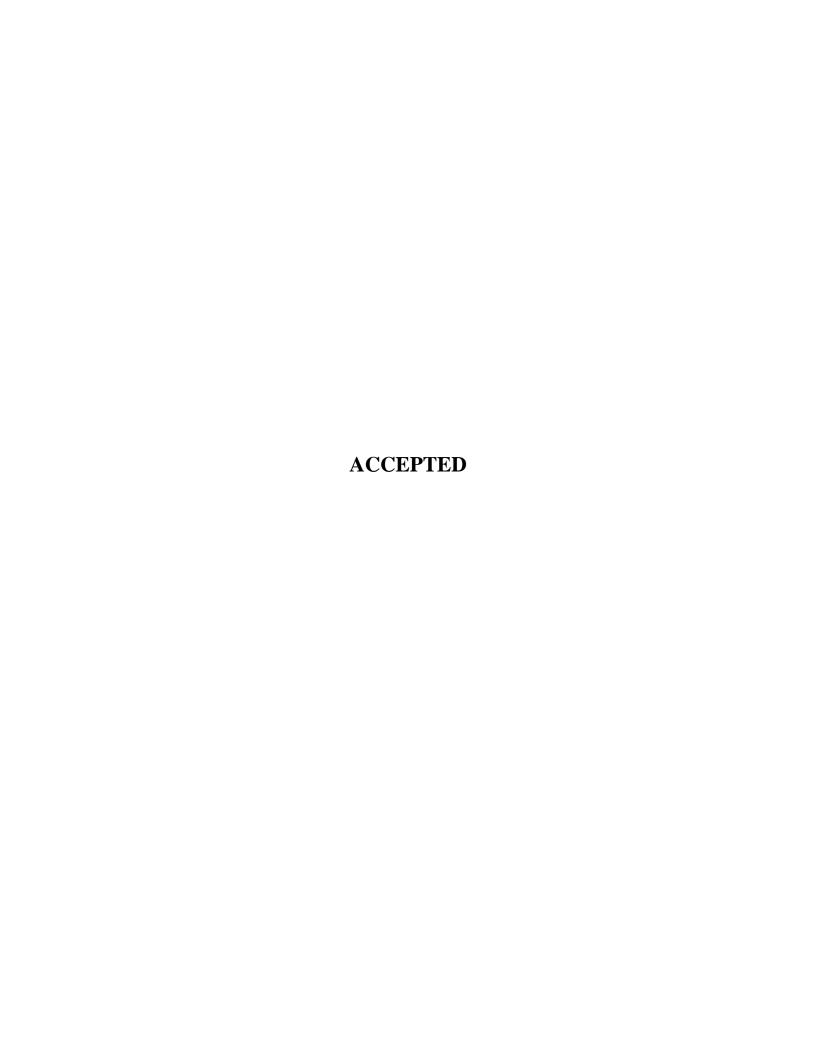
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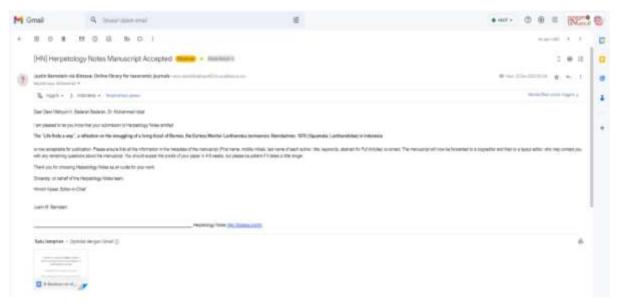
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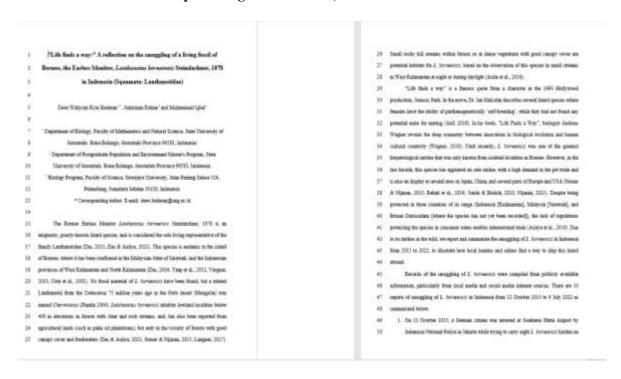
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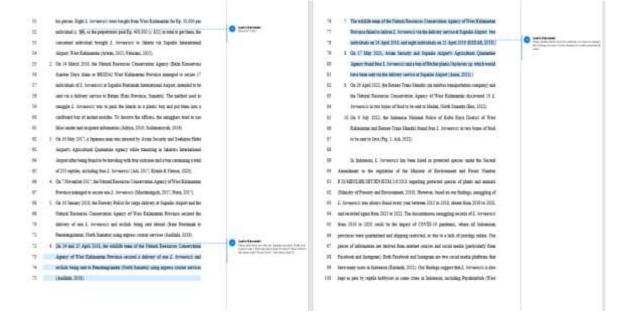






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Perbaikan Revisi ke-5 dari Accepted

"Life finds a way:" A reflection on the smuggling of a living fossil of Borneo, the Earless Monitor *Lanthanotus borneensis* Steindachner, 1878 in Indonesia (Squamata: Lanthanotidae)

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The Borneo Earless Monitor *Lanthanotus borneensis* Steindachner, 1878 is an enigmatic, poorly-known lizard species, and is considered the sole living representative of the family Lanthanotidae (Das, 2013; Das & Auliya, 2021). This species is endemic to the island of Borneo, where it has been confirmed in the Malaysian State of Sarawak; and the Indonesian provinces of West Kalimantan and North Kalimantan (Das, 2004; Yaap et al., 2012; Vergner, 2013; Uetz et al., 2001). No fossil material of *L.borneens is* have been found, but a related Lanthanotid from the Cretaceous 75 million years ago in the Gobi desert (Mongolia) was named *Cherminotus* (Pianka 2004). *Lanthanotus borneensis* inhabits lowland localities below 400 m elevations in forests with clear and rock streams, and; has also been reported from agricultural lands (such as palm oil plantations), but only in the vicinity of forests with good canopy cover and freshwaters (Das & Auliya, 2021; Stoner & Nijman, 2015; Langner, 2017). Small rocky hill streams within forests or dense vegetation with good canopy cover are potential habitats for *L. borneensis*, based on the observation of this species in small streams in West Kalimantan at night or during daylight (Arida et al., 2018).

"Life finds a way" is a famous quote from a character in the 1993 Hollywood production, Jurassic Park. In the movie, Dr. Ian Malcolm describes several lizard species where females have the ability to parthenogenetically 'self-breeding', while they had not found any potential male for mating (Arif, 2016). In his book, "Life Finds a Way", biologist Andreas Wagner reveals the deep symmetry between innovation in biological evolution and human cultural creativity (Wagner, 2019). Until recently, *L. borneensis* was one of the greatest herpetological rarities that was only known from isolated localities in Borneo. However, in the last decade, this species has appeared on sale online, with high demand in the pet trade and is also on display at several zoos in Japan, China, and several parts of Europe and the USA (Stoner & Nijman, 2015; Rehak et al., 2019; Jumle & Badola, 2020; Nijman, 2021). Despite being protected in three countries of its range (Indonesia [Kalimantan], Malaysia [Sarawak], and Brunei Darussalam [Temburong]), the lack of regulations protecting the species in consumer states enables international trade (Auliya et al., 2016; Universiti Brunei Darussalam, 2022). Due to its rarities in the wild, we report and summarize the smuggling of *L. borneensis* in Indonesia from 2015 to 2022, to illustrate how local hunters and sellers find a way to ship this lizard abroad.

Records of the smuggling of *L. borneensis* were compiled from publicly available information, particularly from local media and social media internet sources. There are 10 reports of smuggling of *L. borneensis* in Indonesia from 12 October 2015 to 6 July 2022 as summarized below:

- 1. On 12th October 2015, a German citizen was arrested at Soekarno Hatta Airport by Indonesia National Police in Jakarta while trying to carry eight *L. borneensis* hidden on his person. Eight *L. borneensis* were bought from West Kalimantan for Rp. 50,000 per individual (c. US\$_4), so the perpetrators paid Rp. 400,000 (c. US\$_32) in total to get them; the concerned individual brought *L. borneensis* to Jakarta via Supadio International Airport, West Kalimantan (Arwan, 2015; Felisiani, 2015).
- 2. On 14th March 2016, the Natural Resources Conservation Agency (Balai Konservasi Sumber Daya Alam or BKSDA) West Kalimantan Province managed to secure 17 individuals of *L. borneensis* at Supadio Pontianak International Airport, intended to be sent via a delivery service to Batam (Riau Province, Sumatra). The method used to smuggle *L. borneensis* was to pack the lizards in a plastic box and put them into a cardboard box of instant noodles. To deceive the officers, the smugglers tried to use false sender and recipient information (Aditya, 2016; Sudirmansyah, 2016).
- 3. On 16th May 2017, a Japanese man was arrested by Avian Security and Soekarno Hatta Airport's Agricultural Quarantine Agency while transiting in Jakarta's International Airport after being found to be traveling with four suitcases and a box containing a total of 253 reptiles, including four *L. borneensis* (Adi, 2017; Kitade & Naruse, 2020).
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- 6. On 24th April 2018, the wildlife team of the Natural Resources Conservation Agency of West Kalimantan Province failed to deliver two *L. borneensis* via the delivery service at Supadio Airport (KSDAE, 2018). The delivery package is mentioned as food.
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- 8. On 17th May 2021, Avian Security and Supadio Airport's Agricultural Quarantine Agency found four *L. borneensis* and a box of Pitcher plants *Nephentes* sp. which would have been sent via the delivery service at Supadio Airport (Anon, 2021).
- 9. On 26th April 2022, the Borneo Trans Mandiri (an autobus transportation company) and the Natural Resources Conservation Agency of West Kalimantan discovered 10 *L. borneensis* in two boxes of food to be sent to Medan, North Sumatra (Eno, 2022).
- 10. On 6th July 2022, the Indonesia National Police of Kubu Raya District of West Kalimantan and Borneo Trans Mandiri found four *L. borneensis* in two boxes of food to be sent to Java (Fig. 1; Adi, 2022).

In Indonesia, *L. borneensis* has been listed as protected species under the Second Amendment to the regulation of the Minister of Environment and Forest Number P.20/MENLHK/SETJEN/KUM.1/6/2018 regarding protected species of plants and animals (Ministry of Forestry and Environment, 2018). However, based on our findings, smuggling of *L. borneensis* was always found every year between 2015 to 2018, absent from 2019 to 2020, and recorded again from 2021 to 2022. The discontinuous smuggling records of *L. borneensis* from 2019 to 2020 could be the impact of the COVID-19 pandemic, where all Indonesian provinces were quarantined and shipping restricted, or due to a lack of postings online. Our pieces of information are derived from internet sources and social media (particularly from Facebook and Instagram). Both Facebook and Instagram are two social media platforms that have many users in Indonesia (Karimah, 2021). Our findings suggest that *L. borneensis* is also kept as pets by reptile hobbyists in some cities in Indonesia, including Payakumbuh (West Sumatra), Bandung (West Java), Jakarta, Malang (East Java), Surabaya (East Java), Kumai (Central Kalimantan), Bontang (East Kalimantan) and Banjarbaru (South Kalimantan). Records of smuggling of *L. borneensis* from 2015 to 2022 suggest that this species likely still has a surviving population in certain habitats within its distributional range.

Based on a Youtube channel about an expedition of *L. borneensis* in Western Kalimantan (Panji Petualang, 2019), local people explained this species (locally called "kadal duri" or "kadal bisu") is usually found when they go hunting mammals at night; they mention that *L. borneensis* does not move much when approached. Langner (2017) reported that when detected, *L. borneensis* remain motionless "frozen" on the ground when faced with the torch beam. Based on these behaviours, it is clear *L. borneensis* is relatively easy to catch in the wild. An investigation to learn about the hunting and trading of *L. borneensis* in West Kalimantan found that hunting involves local people and a middleman (reseller) who will manage to ship this species abroad (Arida et al., 2018). This investigation suggests local hunters know the many localities that *L. borneensis* inhabits, and they may keep these secrets. Nuwer (2018) reported that most of the *L. borneensis* available for sale on social media and reptile forums since 2012 likely originated from Indonesian Borneo, where investigations indicate collectors regularly travel there, and local villagers are eager to supply them. Some arrests support this, such as in 2015 and 2017 when a German individual and a Japanese individual were arrested at the Soekarno Hatta International Airport in Jakarta for attempting to smuggle *L. borneensis* out of the country, reportedly purchased from Kalimantan (Arwan, 2015; Felisiani, 2015; Adi, 2017; Janssen & Krishnasamy, 2018; Kitade & Naruse, 2020).

Our findings suggest that the smuggling of *L. borneensis* in Indonesia were collected from West Kalimantan Province. This province would benefit from conservation action to protect this lizard species. Key institutions that prevent smuggling of *L. borneensis* in Indonesia are Natural Resources Conservation Agency, Airport's Agricultural Quarantine Agency, Avian Security at airports, Indonesia National Police as well as private sectors (Borneo Trans Mandiri, an autobus transportation company). Regarding conservation actions in place for *L. borneensis*, Das & Auliya (2021) suggest locality records and relevant sites where the species occurs need to be monitored and managed, particularly in protected areas, and

park staff needs to control illegal collecting activities. Furthermore, a prerequisite to informing train authorities and relevant stakeholders about this illegal trade of animals are required in the future.

Acknowledgements

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Figures

Figure 1. The Borneo Earless Monitor *Lanthanotus borneensis*, intended to have been smuggled to Java, discovered by the Indonesia National Police of Kubu Raya District, 6th July 2022, West Kalimantan Province, Indonesia. Photo by Adi/mabesbharindo.com.



18 Januari 2023



"Life finds a way:" A reflection on the smuggling of a living fossil, the Borneo Earless Monitor *Lanthanotus borneensis* (Squamata: Lanthanotidae) in Indonesia

Dewi Wahyuni Kyai Baderan^{1,*}, Sukirman Rahim², and Muhammad Igbal³

The Borneo Earless Monitor (*Lanthanotus borneensis*) Steindachner, 1878 is an enigmatic, poorly-known lizard species, and is considered the sole living representative of the family Lanthanotidae (Das, 2013; Das and Auliya, 2021). This species is endemic to the island of Borneo, where it has been confirmed in the Malaysian State of Sarawak, and the Indonesian provinces of West Kalimantan and North Kalimantan (Das, 2004; Yaap et al., 2012; Vergner, 2013; Uetz et al., 2001). No fossil material of *L. borneensis* have been found, but a related Lanthanotid from the Cretaceous (75 million years ago) in the Gobi desert (Mongolia) was named *Cherminotus* (Pianka 2004). *Lanthanotus borneensis* inhabits lowland localities below 400 m elevation in forests with clear and rock streams. It has also been reported from agricultural lands (such as palm oil plantations), but only in the vicinity of forests with good canopy cover and freshwaters (Stoner and Nijman, 2015; Langner, 2017; Das and Auliya, 2021). Small rocky hill streams within forests or dense vegetation with good canopy cover are potential habitats for *L. borneensis*, based on diurnal and nocturnal observation in small streams in West Kalimantan (Arida et al., 2018).

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Smuggling records of *L. borneensis* were compiled from publicly available information, particularly from local media and social media internet sources. These constituted 10 smuggling reports of *L. borneensis* in Indonesia from 12 October 2015 to 6 July 2022 as summarized below:

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including Payakumbuh (West Sumatra), Bandung (West Java), Jakarta, Malang (East Java), Surabaya (East Java), Kumai (Central Kalimantan), Bontang (East Kalimantan) and Banjarbaru (South Kalimantan). Overall, these 2015-2022 smuggling records of *L. borneensis* suggest that surviving populations remain present within its distributional range.

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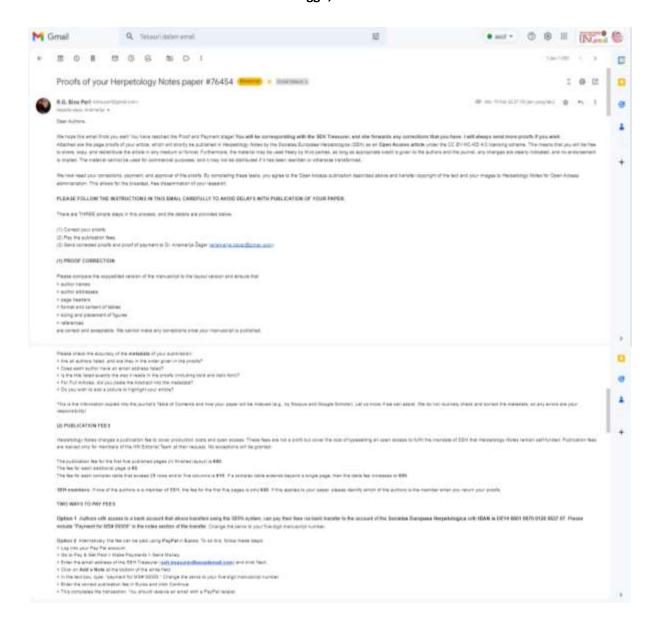
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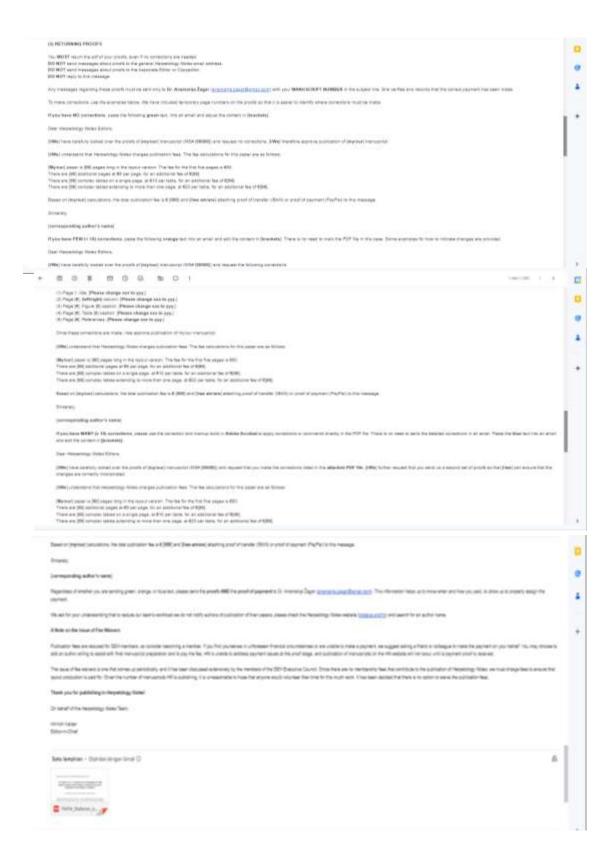
Figures

Figure 1. The Borneo Earless Monitor *Lanthanotus borneensis*, intended to have been smuggled to Java, discovered by the Indonesia National Police of Kubu Raya District, 6 July 2022, West Kalimantan Province, Indonesia. Photo by Adi/mabesbharindo.com.



Minggu, 19 Februari 2023





"Life finds a way": A reflection on the smuggling of a living fossil, the Borneo Earless Monitor, Lanthanotus borneensis (Squamata: Lanthanotidae), in Indonesia

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Steindachner, 1878 is an enigmatic, poorly-known lizard between innovation in biological evolution and human species, and is considered the sole living representative cultural creativity (Wagner, 2019). Until recently, of the family Lauthanotidae (Das., 2013; Das and Anliya, 2021). This species is endemic to the island of Borneo, where it has been confirmed in the Malaysian Borneo. However, in the last decade, this species has State of Sarawak, and the Indonesian provinces of West Kalimantan and North Kalimantan (Das. 2004; Yaap et al., 2012; Vergner, 2013; Uetz et al., 2001). No fossil material of t. horneensis have been found, but a related Nijman, 2015; Rehak et al., 2019; Jumle and Badola, Landianotid from the Cretaceous (75 million years ago) in the Gobi desert (Mongolia) was named Cherminotus (Pizzika 2004). Lanthanotus hornecests inhabits lowland localities below 400 m elevation in forests with clear and rock streams. It has also been reported from agricultural lands (such as palm oil plantations), but only in the vicinity of forests with good canopy cover and freshwaters (Stoner and Nijman, 2015; Languer, 2017; Das and Auliya, 2021). Small rocky hill streams within forests or dense vegetation with good canopy cover are potential habitats for I. hornecosts, based on diumal and noctumal observation in small streams in from publicly available information, particularly from West Kalimantan (Arida et al., 2018).

Hollywood production, Jurassic Park. In the movie, Dr. Ian Malcolm describes several lizzed species with females having the ability of parthenogenesis (or 'selfbreeding') (Arif, 2016). In his book, "Life Finds a Way",

Sanuggling records of I. hornecosts were compiled local media and social media internet sources. These "Life finds a way" is a famous quote in the 1993 constituted 10 unuggling reports of L. hormonisticallywood production, Jurasuic Park. In the movie, in Indonesia from 12 October 2015 to 6 July 2022 as ummurised below

- On 12 October 2015, a German citizen was arrested. at Soekamo Hatta Airport by Indonesia National Police in Jakarta while trying to carry eight I. borneers to hidden on his person Eight I. borneers to were bought from West Kalimantan for Rp. 50,000 perindividual (c. \$4 USD), so the perpetrators paid Rp. 400,000 (c. \$32 USD) in total to get them; the concerned individual brought L. hornecrists to Jakarta via Supadio Intumational Airport, West Kalimantan (Arwan, 2015; Felisiani, 2015).
- 2. On 14 March 2016, the Natural Resources Conservation Agency (Balai Konservasi Sumber Daya Alam or BKSDA) of West Kalimantan

The Borneo Earless Monitor (Lorshovenes horneousls) biologist Andreas Wagner reveals the deep symmetry 1. bornecests was one of the greatest harpetological rarities that was only known from isolated localities in appeared on sale online, with high demand in the pet trade and is also on display at zoos in Japan, China, and several parts of Europe and the USA (Stoner and 2020; Nijman, 2021). Despite being protected in three countries of its range (Indonesia [Kalimantan], Malaysia [Sarzwak], and Brunei Darmualam [Temburong]), the lack of regulations that protect the species in consumer states enables international trade (Auliya et al., 2016; Universiti Brunei Darustalam, 2022). Doe to its rarity in the wild, we report on and summarise the unsuggling of 1. bornewsts in Indonesia from 2015 to 2022, to illustrate how local hunters and sellers find a way to thip this lizard abroad.

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Province managed to secure 17 individuals of t. hornecests at Supadio Pontianak International Airport, intended to be sent via delivery service to Batam (Rizu Province, Sumatra). The method used to annuggle I. berneensis was to pack the lizzeds in a plastic box and put them into a cardboard box of instant noodles. To deceive the officers, the samugglers tried to use false sender and recipient information (Aditya, 2016; Sudimsansyals, 2016).

- 3. On 16 May 2017, a Japanese man was arrested by Arian Security and Soekarno Hatta Airport's Agricultural Quarantine Agency while transiting in Jakarta's International Airport after being found to be traveling with four suitcases and a box containing a total of 253 reptiles, including four L. bomeousts (Adi, 2017; Kitade and Naruse, 2020).
- 4. On 7 November 2017, the Natural Resources Conservation Agency of West Kalimantan Province managed to secure one L. borwerests (Mardaningula, 2017; Putra, 2017).
- 5. On 16 January 2018, the Forestry Police for cargo delivery at Supadio Airport and the Natural Resources Conservation Agency of West Kalimantan Province secured the delivery of one I, borncensts and orchids being sent abroad (from Pontianak to Pematanguantar, North Simatra) using express courier services (Andilala, 2018).
- 6. On 24 April 2018, the wildlife team of the Natural Resources Conservation Agency of West Kalimantan Province failed to deliver two L. borneersts via the delivery service at Supadio Airport (KSDAE, 2018). The delivery package is mentioned as food.
- 7. On 25 April 2018, a delivery package containing eight individuals of 1, horncensts has been secured by the Natural Resources Conservation Agency of West Kalimantan Province. The package is again claimed as food to deliver via the delivery service at Supadio Airport (KSDAE, 2018).
- S. On 17 May 2021, Arian Security and Supadio Airport's Agricultural Quarantine Agency found four L. borneerois and a box of Pitcher plants Nephantes sp. which would have been sent via the delivery service at Supadio Airport (Anon, 2021).
- 9. On 26 April 2022, the Borneo Trans Mandiri (an autobus transportation company) and the Natural Resources Conservation Agency of West Kalimantan discovered 10 L. hornecests in two food boxes to be sent to Medan, North Sumstra (Eno. 2022).

Trans Mandiri found four 1. hovenevests in two food boxes to be sent to Java (Fig. 1; Adi, 2022).

In Indonesia, I. howeverests has been listed as a protected species under the Second Amendment to the regulation. of the Minister of Environment and Forest Number P.20 MENLHK/SETJEN/KUM 1/6/2018 regarding protected species of plants and animals (Ministry of Forestry and Environment, 2018). However, based on our findings, unsuggling of I. hornwensts has been found each year between 2015 to 2018, absent from 2019 to 2020, and recorded again from 2021 to 2022. The discontinuous unuggling records of L. bornecusts from 2019 to 2020 could be the impact of the COVID-19 pandemic, when all Indonesian provinces were quarantined and shipping was restricted, or due to a lack of online postings. Assessed information were derived from interest sources and social media (particularly from Facebook and Instagram); the latter are two social media platforms with many users in Indonesia (Karimah, 2021). Our findings suggest that L. horneensts is also kept as a pet by reptile hobbyists in some cities in Indonesia, including Payalombuh (West Sumatra), Bandung (West Java), Jakarta, Malang (East Java), Surabaya (East Java), Kumai (Central Kalimantan), Bontang (East Kalimantan) and Banjarbaru (South Kalimantan). Overall, these 2015-2022 unsuggling records of L. homeonits suggest that surviving populations remain present within its distributional range.

Based on a Youtube channel about an expedition to find of I. bornecouls in Western Kalimantan (Panji Petualang, 2019), local people explained how species (locally called "kadal duri" or "kadal bisu") is usually found when they go busting manurals at night; mentioning that I., borneously does not move much when approached. Languer (2017) reported that when detected (using a torch beam), L. hornecoule remain motionless "frozen" on the ground Based on these reports, I. homeonsts can relatively easily be caught in the wild. An investigation to learn about the lumning and trading of L. hornecosts in West Kalimantan found that hunting involves local people and a middleman (reseller) who will manage the abroad thipment (Arida et al., 2018). This impertigation suggests local lumters know where L. horneensts occurs, and they might keep these secrets. Number (2018) reported that most of the L. borneever's available for sale on social media and reptile forums since 2012 likely originated from Indonesian Borneo, where investigations indicate collectors regularly travel 10. On 6 July 2022, the Indonesia National Police of towards, and local villagers are eager to supply them. Kubu Raya District of West Kalimantan and Borneo Some arrests support this, such as in 2015 and 2017



Figure 1. The Borneo Farless Monitor LandAcoustar hornoversis, intended to have been energical to Java, discovered by the Indonesia National Police of Kubu Raya District, 6 July 2022, West Kultmantan Province, Indonesia. Photo by Additionless behaviors. com.

when respectively a German and Japanese individual wave arrested at the Soekarno Hatta International Airport in Jakarta for attempting to samggle J. bernevests out of the country, reportedly purchased from Kalimantan (Arwan, 2015; Felixiani, 2015; Adi, 2017; Jamsen and Krishnasany, 2018; Kitade and Natuse, 2020).

Our findings suggest that the sunuggling of Lhornocrists in Indonesia were collected from West Kalimantan Province. This province would benefit from conservation action to protect this lizzed species. Key institutions that prevent unnugling of L. horneensis in Indonesia are Natural Resources Conservation Agency, Airport's Agricultural Quarantine Agency, Arian Security at airports, Indonesia National Police as well as private sectors (Borneo Trans Mandiri, an autobus transportation company). Regarding conservation actions in place for 1. hornecrusts, Das and Anliya (2021) suggest that locality records and relevant sites where the species occurs need to be monitored and managed, particularly in protected areas, and park staff needs to control illegal collecting activities. Furthermore, a prerequisite to inform train authorities and relevant stakeholders about illegal trade of animals are required in the feature.

Acknowledgements. We see very grateful to Prof. Induscrii Das and the seconymusa reviewers for their corresents on an early draft of this marrascript. We thank Mr. Adi (mal-orbitarindo.com) for allowing to to use his photo in this paper.

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Accepted by Justin Bernstein