

Study of Traded Birds in Pontianak City and Kubu Raya Regency, West Kalimantan Indonesia

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Abstract

Birds are animals that are very closely related to human life, both to be used as food or to be distributed as a hobby. However, at this time the existence of birds in nature is increasingly experiencing a decline in diversity and is even threatened with extinction. The purpose of this study was to determine the types of birds traded in the city of Pontianak and Kubu Raya regency along with their IUCN status and trade status (CITES). This research was conducted in March-April 2021. The method used was direct observation (recording) and conducting interviews with bird shop owners. The data obtained were analyzed using qualitative descriptive analysis. Based on the results of research that has been done, the number of shops in Pontianak City is 19 bird shops. Meanwhile, the number of shops in Kubu Raya Regency is nine bird shops. The most common birds found in stores are from the Muscicapidae family, 48 species of birds traded with least concern (LC) status, five species of near threatened (NT), eight species of vulnerable (VU), and two species of critically endangered (CR). 58 bird species are not included in the CITES appendix list, one species is included in Appendix I, namely *Zosterops palpebrosus*, and four species are included in Appendix II, namely *Leucopsar rothschildi*, *Garrulax canorus*, *Pycnonotus zeylanicus*, and *Melopsittacus undulatus*. Meanwhile, the majority of the birds (91%) found in the stores come from the wild compared to those from livestock (9%). The results also showed that wild birds were obtained by traders through hunting and buying from others.

Keywords: illegal wildlife trade, IUCN, song-birds, West Kalimantan,

INTRODUCTION

Wildlife trade is one of the main conservation threats in Southeast Asia (Nijman, 2010). Indonesia is known for its high level of trade in various illegal and unsustainable wildlife species (Shepherd, 2006). The practice may also decline the natural population along with the diversity of bird species decline in the wild. The case of bird trade in West Kalimantan, however, is also seen as a challenge, and the bird trade may lead to being threatened to extinction due to human activities such as hunting and catching for the trade. Bird trade poses a serious threat to the survival of birds in the wild because they come from natural catches and a few birds from captivity. Birds are the most popular pets compared to other animals in Pontianak City and Kubu Raya Regency, West Kalimantan. Birds are in great demand by the public as pets because of the beauty of their feather color and sound. Birds are also one of the trade commodities; birds are supplied by sellers to several areas outside West Kalimantan such as Semarang, Surabaya, and Jakarta.

The reasons behind people keeping and trading birds, include the rise of song-bird competitions and contests in West Kalimantan that resulted in an increasing demand for songbirds and bringing social impacts, are their unique values for songbird lovers and economic impact as income for the people of Indonesia in various regions in West Kalimantan. The results of research conducted by Jepson (2010) in six major cities (Jakarta, Bandung, Solo, Yogyakarta, Surabaya, and Denpasar) showed that one in three correspondent families kept birds, and two out of three correspondents have kept birds in the last ten years. The rise of bird keeping has led to an increasing number of bird markets (Iskandar, 2014) so that the bird trade also increases.

The concern of biologists over the rampant trade is that if the traded species later become endangered or even extinct, there will be a loss and increase in the rate of damage to ecosystems in nature. Empirical research proves that the presence of birds is very important for the continuity of ecosystem services carried out by this group of animals, such as seed dispersers, insect control, and even helps to accelerate ecosystem restoration (Garcia & Martinez, 2012; Whelan, et al., 2015).

In social life among lovers of the songbird, songbirds are used as a representation of one's status in society. Song birds in a social context have a meaning or symbol for the social and economic status of a community, especially for lovers and fans of Song birds in Pontianak City and Kubu Raya Regency. Song birds can provide income to the community, where their income is also channeled to sellers of feed and accessories such as cages and other accessories.

The regulations governing the bird trade in Indonesia are sufficient (Chang and Eaton, 2016). However, the problem lies in the implementation of regulations that have been enacted since 1990. Law of the Republic of Indonesia No. 5 of 1990 concerning Conservation of Natural Resources and Their Ecosystems, and Government Regulation No. 7 of 1999 concerning Preservation of Plant and Animal Species, are still often violated in their implementation. Some factors that pose a threat to the diversity of birds in Kalimantan should not be ignored, therefore attention and efforts from various parties are needed to protect and preserve these wild animals.

METHOD

The method used in this study was a survey method. The survey was conducted by visiting the bird markets and interviewing the owners. We determined the bird shops by walking through markets, recording species and numbers in notebooks, and recording on mobile phones (Nijman et. al., 2019). The purpose of this study was to determine the types of birds traded in Pontianak City and Kubu Raya regency along with their conservation status (IUCN) and trade status (CITES). The hypothesis of this study was to obtain information about the bird trade in Pontianak City and Kubu Raya Regency.

The materials used in this study were: stationery, camera, mobile phone, and books on the Bird Field Guide Series in Sumatra, Java, Bali, and Kalimantan MacKinnon et al (2010), and the Indonesian Bird Atlas (2020). This research was conducted in Pontianak City and Kubu Raya Regency, West Kalimantan (Fig 1). Data collection was carried out for one month, namely in March - April 2021.

The approach conducted was to do field observations by obtaining primary data at the locations of bird shops and species traded in Pontianak City and Kubu Raya Regency. Observations were also carried out by recording the total number of bird shops and determining their conditions. Interviews were also conducted with the owners of the bird shops. Interviews were used to obtain additional data such as the price of birds and the way the birds were obtained. Then the data obtained were analyzed descriptive-qualitatively using the snowball sampling technique (Bernard, 2002), namely by determining key respondents and then other respondents who also knew related information from the previous respondents. The key respondents were people who have extensive knowledge of bird trade activities.

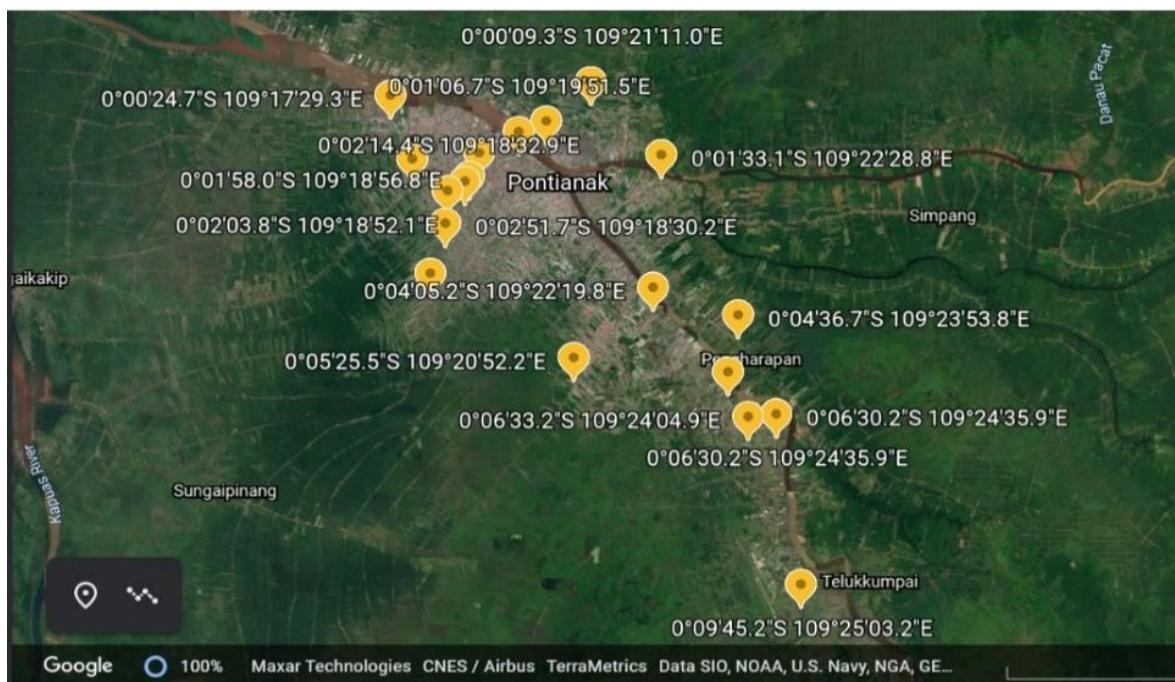


Figure 1. Survey locations of bird shops in Pontianak and Kubu Raya, West Kalimantan.

RESULTS

A. Types of Birds Traded

Research conducted in March – April 2021 obtained a total of 714 individuals of birds traded, consisting of 24 families and 63 species. The number of bird species in each family can be seen in Figure 2 below. Based on the graph above, birds from the *Muscicapidae* 114 individual family are the most traded birds. The demand is assumed because the birds from the *Muscicapidae* family have varied songs and attractive feather colors. The most frequently traded species are *Copsychus malabaricus* and *Copsychus saularis*. In addition, species from the *columbidae* family such as *Geopelia striata* are also in demand and often found in bird shops. In addition, many birds from the *Psittaculidae* family are also found, namely *Agapornis sp.* According to Basuni (1989), the sound is one of the aspects that buyers are interested in buying birds. The sound of birds is the most common reason for people to buy and maintain birds (Iskandar, 2014).

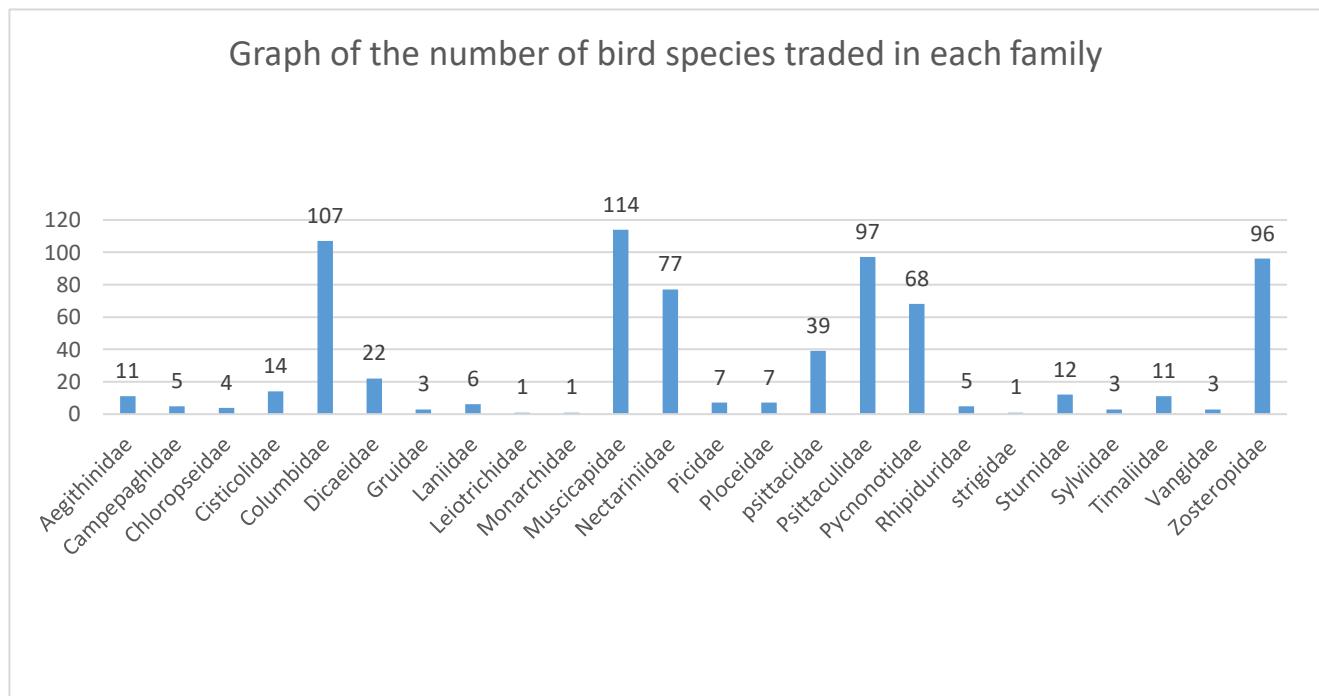


Figure 2. Graph of the number of bird species traded in each family (N:714)

B. Bird Conservation Status (IUCN)

Most of the birds traded in Pontianak City and Kubu Raya Regency have conservation status based on the IUCN (International Union for Conservation of Nature) to include them in the red list as follows: 48 species of birds traded with Least Concern (LC) status, five of Near Threatened (NT) species, eight types of Vulnerable (VU), and two types of Critically Endangered (CR).

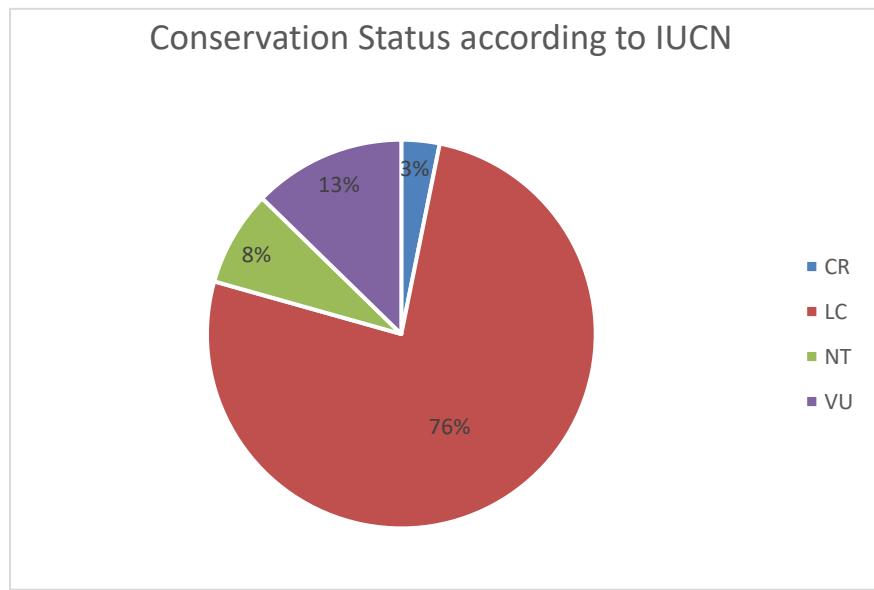


Figure 3. Chart of the status of traded birds based on the IUCN red list (N=63)

C. Trading Status (CITES)

CITES (Convention on International Trade of Endangered Species of Wild Fauna and Flora) categorizes species into 3 Appendixes, namely Appendix I (all species that are threatened with extinction and have an impact when traded). Trade is only permitted under certain conditions, for example for scientific research, Appendix II (species whose status is not yet threatened but will be threatened with extinction if overexploited), and Appendix III (all species that are also included in regulations in trade and other countries seek to control trade to avoid unsustainable exploitation) (Soehartono and Mardiastuti, 2002). The following is a graphic result based on the list of CITES attachments:

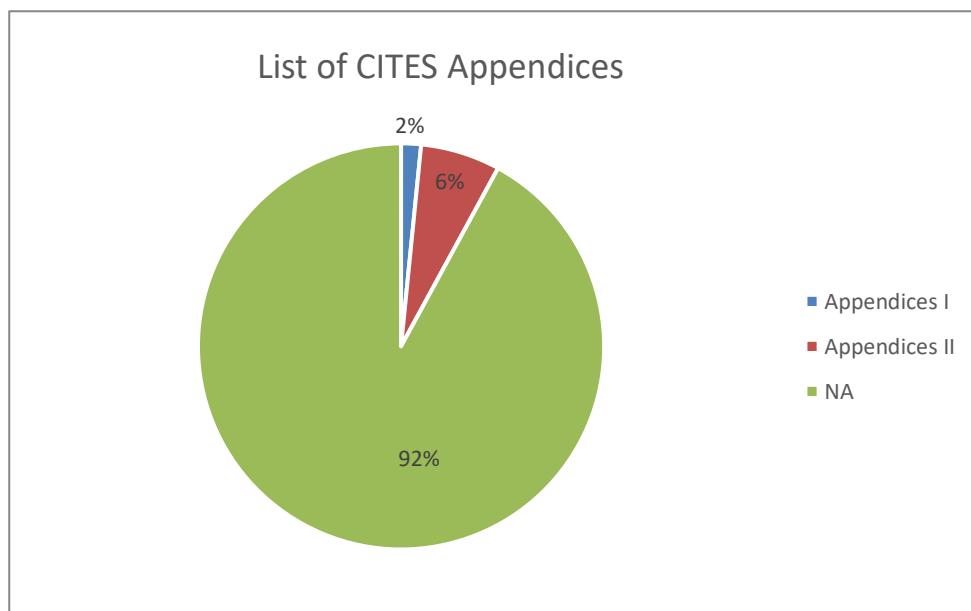


Figure 4. Graph of the percentage of species in the CITES appendix list (N=63)

D. The Origin of Birds (Wild or Farm)

Based on the results obtained when conducting interviews with shop owners both in Pontianak City and in Kubu Raya Regency, the majority of birds traded come from the wild, with a percentage value of 91%. This is because people still do not know how to raise birds and of the lack of capital to do bird farming. Therefore, the birds they sell come from the wild or nature. Meanwhile, birds originating from livestock are based on the percentage value obtained, which is 9%. This is due to the lack of information on how to raise birds.

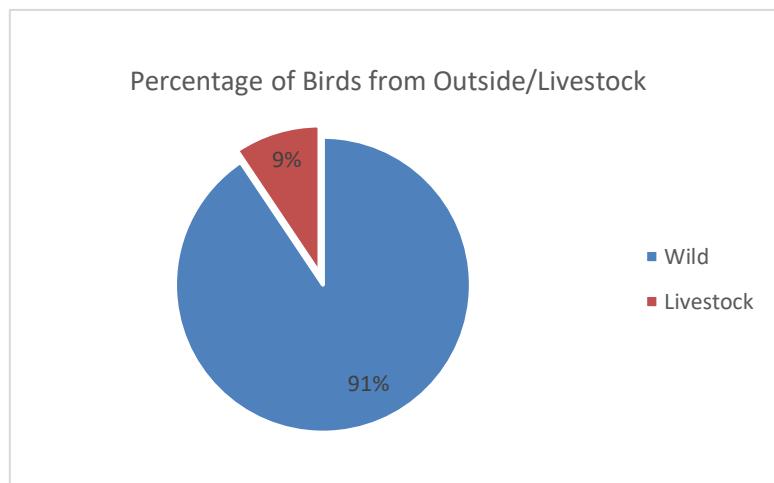


Figure 4. Graph of the percentage of bird origin (N=714)

The birds traded in Pontianak City and Kubu Raya Regency have different conditions. Shop owners usually place birds into cages according to the types of birds, making it easier for buyers to see what birds they will buy. The bird that is often traded is the stone magpie because the bird is often used in song bird contests.



Figure 6. *Zosterops* spp or locally called *burung kacamata* (spectacle bird) traded in one of the Pontianak and Kubu Raya Bird Markets.

DISCUSSION

Based on the results of interviews, the birds traded in Pontianak City and Kubu Raya Regency were obtained from direct hunting in the wild (forest), bought from other people, and obtained by accident. The majority of sellers get birds from West Kalimantan areas such as Kapuas Hulu, Sekadau, and Ketapang, where there are still forests in these areas.

Birds traded in Pontianak City and Kubu Raya Regency have conservation status based on the IUCN (International Union for Conservation of Nature) red list as follows: 48 species of birds traded are Least Concern (LC) species with low-risk levels. An LC is an IUCN category assigned to a species that has been evaluated but does not fall into any category. Five other bird species fall into the IUCN Near Threatened (NT) category. The followings are the types of birds: *Threron formosae*, *Prinia familiaris*, *Stachyris maculata*, *Stachyris maculata*, and *Prinochilus thoracicus*. *Treron formosae* is the most common bird found in bird shops. *Treron formosae* is widespread in the Greater Sunda archipelago, namely Sumatra, Kalimantan, Java, and Bali (Walter, 1981). Birds of the *Columbidae* tribe have a dense, fat body shape with a short and strong beak, and eat fruits and seeds (Necker, 2007).

The *Columbidae* tribe is one of the most threatened bird families in the world. According to Walker (2007), of the 304 species, that are still living in nature, 59 (19%) of them are threatened with extinction. Almost all the endangered *Columbidae* bird species are found in tropical forests, and half of them are in the three main distribution areas of these birds, namely Indonesia, the Philippines, and Polynesia. The main causes of the threat of *Columbidae* birds are habitat loss and fragmentation due to agricultural activities and logging, hunting for consumption, and predators (Walker, 2007). *Treron formosae* is one of the bird species from the *Columbidae* tribe that is widely hunted in Indonesia, both for consumption purposes and for being considered a pest (Sawitri et al., 2009). For communities around the forest, especially those whose economic conditions are classified as poor, the *Treron formosae* is an alternative to meet the needs of animal protein because it is easy to obtain, and the price is cheap (Sawitri et al., 2010). Poaching is carried out using nets, slingshots, and snares. The NT (Near Threatened) is a conservation status given to species that may be in a state of threatened or near-threatened extinction, even though they are not listed as threatened.

Eight species are included in the IUCN Vulnerable (VU) category. The types of birds that fall into this category are *Agapornis sp*, *Zosterops palpebrosus*, *Acridotheres javanicus*, *Belocercus longicaudus*, *Pycnonotus xanthopygus*, *Goura cristata*, *Patagioenas oenops*, and *Cyornis caeruleatus*. Based on the most common bird found in the VU category is *Agapornis sp*. It is currently found about 9 species of *Agapornis sp*. All of these species belong to the genus *Agapornis* and have fur with a dominant green color. In addition to the 9 native species, there are 20 other types of *Agapornis sp*, which are the result of crosses between species. Several *Agapornis sp* species are declared endangered by the IUCN. One of them is the black-cheeked *Agapornis sp* from Zambia, whose population is only around 10,000. Populations of this bird are found in the Southwest of America, San Francisco, and several cities in Africa. In these areas, we can see many *Agapornis sp* such as sparrows in Indonesia flying around the house (Suyono, et.al, 2019). The Vulnerable (VU) is a conservation status given to a species at risk of extinction in the wild in the future.

Two types are included in the IUCN Critically Endangered (CR) category. The CR (Critically Endangered) is a conservation status given to species at risk of extinction. In the IUCN Red List, there are 1,742 animals and 1,577 plants with critical status. Examples of Indonesian animals with critical status include; Sumatran Tiger, Javan Rhino, Sumatran Rhino, Bali Starling, Sumatran Orangutan, Javan Eagle, Javanese Trulek, Bawean Deer. The types of birds that fall into this category are the *Pycnonotus zeylanicus* and the *Leucopsar rothschildi*. The two types of birds that are included in the CR category that is often found in bird shops are the swamp *Pycnonotus*

zeylanicus. Swamp *Pycnonotus zeylanicus* are widely spread in Indonesia. In Java, this bird has greatly dwindled its population due to busy hunting since the 80s. Birds traded in Java are mostly imported from Sumatra and Kalimantan. Now in many parts of Sumatra Island (e.g., in Jambi, along Batang Bungo), the population continues to decline (Gunawan, 2013).

The bird price ranges, from the lowest price around Rp. 10,000 to Rp. 13,000,000. The higher the price of the bird, the better the quality, which is both based on its beauty and the sound of value for the song bird competition. Kalimantan itself, especially Pontianak City and Kubu Raya Regency, is an area that has a song bird competition, which is quite popular. The majority of the people there keep birds at home, whether used for competitions or just to enjoy the sound and beauty of the birds.

Based on the results of research in Pontianak City and Kubu Raya Regency, 58 species of birds are not included in the list of CITES attachments, and 1 species is included in Appendix I, namely Indian white aye (*Zosterops palpebrosus*), and 4 species are included in Appendix II, namely *Leucopsar rothschildi*, *Garrulax canorus*, *Pycnonotus zeylanicus*, and *Melopsittacus undulates*.

CONCLUSION

Based on the results and discussion above, it can be concluded that research on birds traded in Pontianak City and Kubu Raya Regency obtained the results that the total number of shops surveyed in Pontianak City was 19 bird shops. Meanwhile, the number of shops surveyed in Kubu Raya regency was nine bird shops. The most common birds found in stores are from the *Muscicapidae* family, 48 species of birds traded with Least Concern (LC) status, five of Near Threatened (NT) species, eight Vulnerable (VU) species, and two Critically Endangered (CR) species. 58 bird species are not included in the CITES appendix list, and one species is included in Appendix I, namely *Zosterops palpebrosus*, and four species are included in Appendix II, namely *Leucopsar rothschildi*, *Garrulax canorus*, *Pycnonotus zeylanicus* and *Melopsittacus undulates*. Meanwhile, the majority of the birds found in the stores come from the wild compared to those from livestock.

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REFERENCES

Atlas Burung Indonesia. (2020). Atlas Burung Indonesia: wujud karya peneliti amatir dalam memetakan burung nusantara. Yayasan Atlas Burung Indonesia: Batu.

Basuni, Sambas dan Gunawan Setiyani. (1989). Studi Perdagangan Burung di Pasar Pramuka, Jakarta dan Teknik Penangkapan Burung di Alam. Media Konservasi Vol. II. Halaman 9-18.

Bernad, H. (2002). Research Methods in Anthropology: Qualitative and Quantitative Methods, Third Edition, Altamira Press, Walnut Creek, California.

Chng, Serene C.L. and Eaton James A. 2016. In The Market for Extinction -Eastern and Central Java-. TRAFFIC: Petaling Jaya.

García, D., & Martínez, D. (2012). Species richness matters for the quality of ecosystem services: a test using seed dispersal by frugivorous birds. *Proceedings of the Royal Society B: Biological Sciences*, 279(1740), 3106-3113.

Gunawan, H. (2013). Budidaya dan Pemasteran Burung Cucak Rawa. Pustaka Baru. Yogyakarta.

Iskandar, J. (2014). Dilema Antara Hobi dan Bisnis Perdagangan Burung Serta Konservasi Burung. *Chimica et Natura Acta* Vol 2. Halaman 180-185.

Jepson, P. (2010). Towards and Indonesian Bird Conservation Ethos: Refelction from a Study of Birdkeeping in the Cities og Java and Bali. Dalam Iskandar, J. 2014. Dilema Antara Hobi dan Bisnis Perdagangan Burung Serta Konservasi Burung. *Chimica et Natura Acta* Vol 2. Halaman 180-185.

John MacKinnon; (1992) Karen Phillipps; Bas van Balen. Burung-burung di Sumatera, Jawa, Bali dan Kalimantan termasuk Sabah, Sarawak dan Brunei Darussalam.. LIPI- Seri Panduan Lapangan. Puslitang Biologi. Jakarta.

Nijman, V. (2010). An overview of international wildlife trade from Southeast Asia. *Biodiversity and Conservation* 19(4): 1101-1114.

Nijman, V., Morcatty, T., Smith, J. H., Atoussi, S., Shepherd, C. R., Siriwat, P., ... & Bergin, D. (2019). Illegal wildlife trade—surveying open animal markets and online platforms to understand the poaching of wild cats. *Biodiversity*, 20(1), 58-61. [10.1080/14888386.2019.1568915](https://doi.org/10.1080/14888386.2019.1568915)

Necker, R. (2007). Head-bobbing of walking birds. *Journal of comparative physiology, A neuroethology, sensory, neural and behavioral physiology* 193 (2): 1177- 1183. Doi:10.1007/s00359-007-0281-3. <http://dx.doi.org/10.1007%Fs00359-007- 0281-3>. Diakses tanggal 20 November 2013.

MacKinnon, J., Phillipps, K., & van Balen, B. (2010). *Seri Panduan Lapangan Burung-Burung di Sumatera, Jawa, Bali dan Kalimantan*. Bogor: Pusat Penelitian dan Pengembangan Biologi LIPI.

Sawitri, R., R. Garsetiasih, A.S. Mukhtar. (2010). Konservasi in-situ dan eks-situ burung punai (Columbidae) sebagai sumber pangan. Laporan Proyek Program Insentif Ristek. 30 hal. Puslitbang Hutan dan Konser-vasi Alam, Bogor.

Shepherd, C.R (2006). The bird trade in Medan, North Sumatra: an overview. *BirdingASIA* 5:16-24.

Soehartono, T. and Mardiastuti, A. (2002). CITES implementation in Indonesia. Nagao Natural Environment Foundation: Jakarta.

Suyono1, Ma'rifatun Khoiunnisa Ulmahmuda (2019). Sistem Informasi Berbasis Web Pada Kios Burung Bapak Yadi. *JTKSI*, Vol.02 No.01 Januari 2019 Hal. 34-37. 1,2Prodi Menejemen Informatika, STMIK Pringsewu Lampung. Jl. Wisma Rini No. 09 Pringsewu, Lampung, Indonesia

Walker, J. (2007). Geographical patterns of threat among pigeons and pigeons (Columbidae). Diakses tanggal 10 Januari 2014.

Whelan, C.J., Sekercioglu, C. H., & Weeny, D. G. (2015). Why birds matter: from economic ornithology ecosystem services. *Jurnal of Ornithology*, 15