



ISSN : 3032-131X

<https://doi.org/10.61796/jgrpd.v1i4.1004>

HARVESTER ANT AS AN IMPORTED COMMODITY FOR ANT LOVERS IN INDONESIA WHICH BECOMES A PEST AND CAUSES ENVIRONMENTAL DAMAGE

Emy Rosnawati ¹, Malik Muhammad Hermansyah ²^{1,2} Law Study Program, Muhammadiyah University of Sidoarjo, Indonesiaemy_lawyer@umsida.ac.id

Received: Feb 22, 2024; Accepted: Mar 29, 2024; Published: Apr 22, 2024;

Abstract: This study is to analyze whether Harvester Ant can be categorized as an animal that is harmful to the environment to be imported into Indonesia and why the import of Harvester Ant ants which are considered pests in other countries is still going on so far and can still enter Indonesia. This research uses the Normative Juridical method and this research uses a statute approach (using systematic and grammatical interpretation). The result of this study is that the import of harvers ant ants is a prohibited import because these ants are very dangerous ants and invasive insects for other ants and the surrounding environment which is feared to cause crop failure for local farmers thus causing damage to the environment and ecosystem.

Keywords: Author's Instructions; Harvester Ant, Legal Implications, Environmental Damage, Dangerous Animals

This is an open-access article under the [CC-BY 4.0](https://creativecommons.org/licenses/by/4.0/) license

Introduction

Harvester Ant or Messor in the country or continent of origin of these ants is considered a pest which in many countries has been banned from export because it can cause environmental damage through the way of eating and the type of food of these ants. Harvester Ant prefers to nest in open grasslands, especially areas with loamy or clay soils. They like to nest along the edges of dirt roads. Harvester Ants are most active during hot conditions [1].

In Europe, Harvester Ants are considered serious agricultural pests, but they do not attack houses or buildings. Most people don't like the Harvester Ant colony because of its painful sting and habit of cleaning the vegetation around the nest, This ant eats seeds, if it is removed from the hands of ant lovers it can cause considerable damage to rice and other seed farmers in Indonesia, because these ants are notoriously voracious and multiply quite quickly [2].

Harvester Ant is 1/4 to 1/2 inch long and is red to dark brown in color. They are large, have a square head, elbow antennae, large mandibles and have spines on the body. Their mounds or nests are distinctive. There is usually no vegetation outside the nest from 3 to 6 feet around the middle exit of their colony and along the foraging path emanating from the colony. The bare soil around the entrance is often covered with small pebbles dug from tunnels inside the nest. Near the entrance there will be a garbage dump, which serves as a garbage dump where gravel, dead ants, and other waste accumulates [3].

According to Schmidt, J. O. 1990. In his research work entitled "Hymenoptera venoms: striving toward the ultimate defense against vertebrates." Harvester Ant is a genus of ants, where this Harvester Ant ant is different from the others, because this Harvester Ant ant is a large ant and has a sting that is quite sick and poisonous and is considered a pest by the country and continent of

origin in Africa and Europe, but because of its unique shape, nature and food this ant is a special attraction to be imported in Indonesia [4].

"Ecosystem Engineering of Harvester Ants: Effects on Vegetation in a Sagebrush-Steppe Ecosystem" by Elyce N. Gosselin states that Harvester Ants are influential in many ecosystems because they distribute and consume seeds, remove vegetation around nests, and redistribute soil particles and nutrients. "Dangerous trade in ants" by Feral Herald states that the trade in ants is a very dangerous trade because in some species there are those who can prey on baby rats, and can eat adult geckos [5].

"Reduction of seed harvester ants" by Tufail Ahmad stated that Harvester ants that eat seeds are one of the dominant insect pest groups in Eritrea which causes large economic losses to cereal crops starting from sowing seeds to harvesting. This causes poor quality of malathion, carbaril and neem seed extracts [6].

From the literature above in the continent of origin and the country of origin of these ants are indicated as pests that are quite dangerous for plants and the environment, in Indonesia itself there are many legal and illegal imports and exports of ants that have occurred, with the supervision or not of ant import exports are still very easy to do by relying on import export services through legal services or bringing their own through commercial aircraft, Where the ants are very small which can be placed in a test tube without inviting much reaction or attention from security and airport inspection. The large number of ant trades carried out by Indonesian citizens by export and import is one of the main reasons or objectives of the importance of this research.

Harvester Ants have a diet or eat grains. All seeds can be eaten by the Harvester Ant and can also change its diet to meet its needs where it can eat other insects. The posture is larger than the native local ants of Indonesia, which in this case has the potential to eradicate local ants and can potentially damage the existing ecosystem if it is released into the wild. Because the function of local ants themselves is to fertilize the soil and can create natural irrigation channels for local ecosystems. Because basically this Harvester Ant is a pest on its continent of origin and is very likely to become a pest on other continents as well.

Harvester Ant colonies live for 15-20 years and reach a reproductive and stable colony size of about 12,000 workers in about 5 years. Mating occurs from spring to fall each year, but generally follows summer. Winged males and females flock, pair and mate. Males soon die and females look for suitable nesting sites. After dropping her wings, the queen ant digs a burrow and produces some eggs. The larvae hatch from the eggs and develop through several stages (instar). The larvae are white and legless, shaped like a crookneck gourd with a distinct small head. The Hatching Cocoon becomes a worker ant produced by the queen ant and begins to care for other developing ants, enlarge the nest and forage.

From the explanation above, the purpose of this study is to analyze whether Harvester Ant can be categorized as an animal that is harmful to the environment to be imported into Indonesia? and why are the imports of Harvester Ant ants which are considered pests in other countries still running so far and can still enter Indonesia? The study was also made to avoid crop failures from local farmers and prevent damage to the environment and ecosystems [2].

In 2008 the development of ants became a special attraction for some people in the world and began to be developed to be used as a hobby, in Indonesia it was only crowded in 2019 where many Indonesians began to develop ants as a hobby but in Indonesia there were also many ants that were developed to take the quoto. Because the trend began in 2020, many began to raise and many felt bored with local ants or native ants, so many began to import ants from foreign countries such as Europe, Australia and America. one of them is the Harvester Ant which comes from Europe.

In the Regulation of the Minister of Trade Number 12 of 2020 concerning Goods Prohibited from Import, it is explained that "related to the protection of the health and safety of humans, animals, fish, plants, and the environment" where ants in the sense of Harvester Ants can still escape to enter the country through the import system and are not considered pests. In addition, in Law Number 32 of 2009 in Article 20 Paragraph (2) Letter G it is explained through Government Regulation Number

22 of 2021 that these criteria have not been regulated in the ministerial regulation and only through expert parameters and study results. And in Law Number 32 of 2009 in article 21 paragraph (3) letter h it is mentioned in Government Regulation Number 22 of 2021 that there are standard criteria for ecosystem damage but there is the word "sea", and nothing else is in accordance with article 21 paragraph (3) letter h in the Government Regulation. So I assume that in Law Number 32 of 2009 itself there is a mismatch for article 21 paragraph (3) letter h where there should be the word "sea" after the word ecosystem..

Methods

The type of research used in this study is Normative Juridical. This research uses a statute approach (using systematic and grammatical interpretation). Primary legal materials include, Law Number 32 of 2009 concerning Environmental Protection and Management, Law Number 5 of 1990 concerning the Conservation of Biological Natural Resources and Their Ecosystems, Law Number 21 of 2019 concerning Quarantine of Animals, Fish, and Plants, Government Regulation Number 28 of 2011 concerning the Management of Nature Reserves and Nature Conservation Areas, Government Regulation Number 22 of 2021 concerning the Implementation of Protection and Management Environment, Government Regulation Number 29 of 2023 concerning Implementation Regulations of Law Number 21 of 2019 concerning Quarantine of Animals, Fish, and Plants, Regulation of the Minister of Environment and Forestry Number 94 of 2016 concerning Invasive Types, Regulation of the Minister of Trade Number 12 of 2020 concerning Goods Prohibited from Import. Secondary legal materials, which are materials that provide explanations of primary legal materials, consisting of books, journals, papers, and related writings. After the legal materials are processed, then it is continued with the technique of analyzing legal materials using Inductive analysis

Results and Discussion

A. **Can Harvester Ant be categorized as an animal that is harmful to the environment to be imported into Indonesia?**

According to KBBI, dangerous animals consist of the words animal and dangerous, animals have synonyms for animals and animals which have the meaning of living creatures that are able to move and are able to react to stimuli, but are not intelligent. While the word dangerous in the thesaurus itself has synonyms dangerous, savage, ferocious, wild, predatory which according to KBBI has the meaning, wild animals and usually hostile to humans. The term animal or animal is regulated in Law Number 5 of 1990 concerning the Conservation of Biological Natural Resources and Their Ecosystems and in the latest derivative regulation, namely Government Regulation Number 28 of 2011 concerning the Management of Nature Reserves and Nature Conservation Areas in article 1 Number 17 it is explained that wildlife is an animal that still has wild nature, the purity of the species and genetics that live in the wild and those maintained by humans. In article 1 letter 10 there is the word "invasive", according to the Regulation of the Minister of Environment and Forestry Number 94 of 2016 concerning Invasive Types, article 1 number 2 means a species, both native and non-native species, that massively colonize a habitat that can cause damage to the ecology, economy and society. And in the Regulation of the Minister of Environment and Forestry Number 94 of 2016 concerning Invasive Types, article 1 number 3 states the term "Invasive Foreign Types" which means plants, animals, microorganisms, and other organisms that are not part of an ecosystem that can cause damage to ecosystems, the environment, economic losses, and/or have a negative impact on biodiversity, animals, and human health [7], [8], [9], [10].

In Government Regulation Number 29 of 2023 concerning the Implementation Regulation of Law Number 21 of 2019 concerning Animal, Fish, and Plant Quarantine article 76 paragraph (4), it is stated that invasive foreign animals also have the potential to transmit animal diseases. Meanwhile, according to Law Number 21 of 2019 concerning Quarantine of Animals, Fish, and

Plants, article 7 letter e of invasive alien species also has the potential to interfere with human health, Animals, Fish, Plants, Food Quality and environmental sustainability. Meanwhile, according to the regulation of the minister of trade Number 12 of 2020, goods that are prohibited from being imported are goods that are prohibited because they are to protect the health and safety of humans, animals, fish, plants, and the environment, or it can be concluded to protect the ecosystem. The following is a table of criteria for dangerous animals: [11], [12], [13].

Table 1. Characteristic features of dangerous animals

Dangerous Animals	
Criterion	Source
Wild	Government Regulation Number 28 of 2011 Article 1 Number 17
Nurtured by Humans	Government Regulation Number 28 of 2011 Article 1 Number 17
Reacting to stimuli	KBBI
Unreasonable	KBBI
Usually hostile to Humans	KBBI
Colonizing	Regulation of the Minister of Environment and Forestry Number 94 of 2016 Article 1 Number 2
Massive	Regulation of the Minister of Environment and Forestry Number 94 of 2016 Article 1 Number 2
Causing harm to the Ecology	Regulation of the Minister of Environment and Forestry Number 94 of 2016 Article 1 Number 2
Causing losses to the Economy	Regulation of the Minister of Environment and Forestry Number 94 of 2016 Article 1 Number 2
Causing losses to the Social	Regulation of the Minister of Environment and Forestry Number 94 of 2016 Article 1 Number 2
Causing damage to the Ecosystem	Regulation of the Minister of Environment and Forestry Number 94 of 2016 Article 1 Number 3
Causing environmental damage	Regulation of the Minister of Environment and Forestry Number 94 of 2016 Article 1 Number 3
Negatively impacting biodiversity	Regulation of the Minister of Environment and Forestry Number 94 of 2016 Article 1 Number 3
Negatively impacting animal diversity	Regulation of the Minister of Environment and Forestry Number 94 of 2016 Article 1 Number 3
Negative impact on human health	Regulation of the Minister of Environment and Forestry Number 94 of 2016 Article 1 Number 3
Potentially interfering with the health of Animals	Law Number 21 of 2019 Article 7 Letter e
Potentially interfering with the health of Fish	Law Number 21 of 2019 Article 7 Letter e
Potentially interfering with Plant health	Law Number 21 of 2019 Article 7 Letter e

Potential to disrupt Food Quality
Potential to transmit Animal Diseases

Law Number 21 of 2019 Article 7 Letter e
Government Regulation Number 29 of 2023
Article 76 Paragraph (4)

Harvester ants are ants of the genus *Pogonomyrmex* and are generally known for their behavior of collecting and eating seeds and having painful stings. The scientific genus name of this insect means "bearded ant", which refers to the fringe of hair called the psammaphore that lines the underside of the surface of the head. Harvester ants use their feathery antennae to carry soil and seeds, although not all species of *pogonomyrmex* ants have this trait.

The most common sign of a Harvester ant attack is a damaged and bare area of vegetation surrounding its nest and mounds. Certain species are known to build nest mounds one meter high and five meters wide and humans are often stung for stepping on their nests. Harvester ants have painful stings that can cause anaphylactic reactions in humans or animals that step on their nest and get stung. Harvester ants feed on the collected seeds, sometimes also eating small insects and other arthropods, alive or dead [14], [15].

Like other ant species, Harvester ants mate by swarming in the air. The queen and male known as alates, or winged ants, usually swarm in late summer. Males die after mating, while females release their wings, dig new nests, and store eggs that will hatch into larvae before eventually developing into workers. The workers then take over the maintenance of the nest and feed the new larvae produced by the queen, which can reach thousands of ants to tens of thousands of ants [16], [17].

These pests can damage crops and affect land used for animal grazing. When building their nests, they severely damage or deforest vegetation, which can lead to soil erosion. Ant nests located near highways or houses can cause holes. The following is a table of criteria from the Harvester ant [8]:

Table 2. Characteristic features of harvester ant

Harvester ant	
Criterion	Source
Wild	M. Motro, M. Uzi, D. Cohen, "Decision Making by Young Queens of The Harvester Ant <i>Messor Semirufus</i> While Searching for A Suitable Nesting Site," Research Article, vol. 63, no. 4, p. 615-622, 2016 [19].
Nurtured by Humans	L. Barnett, "Dangerous Trade in Ants, Ants Are Destroying Your Plants by Nurturing," Journal of Ecology, vol. 11, no. 2, p. 31, 2021 [2].
Reacting to stimuli	J.U. Shaharra, H.H. Richard, "Western Harvester Ants: Foraging Success and Nest Densities in Relation to Grazing Intensity," Great Plains Research, vol. 12, no. 2, p. 261-273, 2002 [20].
Unreasonable	M. Motro, M. Uzi, D. Cohen, "Decision Making by Young Queens of The Harvester Ant <i>Messor Semirufus</i> While Searching for A Suitable Nesting Site," Research Article, vol. 63, no. 4, p. 615-622, 2016.
Usually hostile to Humans	K. Ryan, "Task Allocation and The Logic of Research Questions: How Ants Challenge

	Human Sociobiology," Biological Theory, vol. 14, no. 1, p. 52-68, 2018 [21].
Colonizing	J.U. Shaharra, H.H. Richard, "Western Harvester Ants: Foraging Success and Nest Densities in Relation to Grazing Intensity," Great Plains Research, vol. 12, no. 2, p. 261-273, 2002.
Massive	J.U. Shaharra, H.H. Richard, "Western Harvester Ants: Foraging Success and Nest Densities in Relation to Grazing Intensity," Great Plains Research, vol. 12, no. 2, p. 261-273, 2002.
Causing harm to the Ecology	E.N. Gosselin, "Ecosystem Engineering of Harvester Ants Effects on Vegetation in A Sagebrush-Steppe Ecosystem," Journal of the Idaho Academy of Science, vol. 76, no. 1, p. 82-89, 2016.
Causing losses to the Economy	A. Manners, "Invasive Ant Activity Exotic Invasive Ants A Threat To Business And Our Way Of Life," biosecurity capacity Journal, vol. 22, no. 3, p. 60, 2019 [3].
Causing losses to the Social	L. Barnett, "Dangerous Trade in Ants, Ants Are Destroying Your Plants by Nurturing," Journal of Ecology, vol. 11, no. 2, p. 31, 2021.
Causing damage to the Ecosystem	E.N. Gosselin, "Ecosystem Engineering of Harvester Ants Effects on Vegetation in A Sagebrush-Steppe Ecosystem," Journal of the Idaho Academy of Science, vol. 76, no. 1, p. 82-89, 2016.
Causing environmental damage	M. Motro, M. Uzi, D. Cohen, "Decision Making by Young Queens of The Harvester Ant Messor Semirufus While Searching for A Suitable Nesting Site," Research Article, vol. 63, no. 4, p. 615-622, 2016.
Negatively impacting biodiversity	A. Tufail, "Reduction of Seed Harvester Ants, Pogonomyrmex Spp. (Hymenoptera: Formicidae) Damages by Using Some Insecticides," Afr. J. Agric. Res, vol. 21, no. 2, p. 65, 2012.
Negatively impacting animal diversity	J.O. Schmidt, Hymenoptera Venoms: Striving Toward the Ultimate Defense Against Vertebrates, New York, State University of New York Press, 1990, p. 387-387.
Negative impact on human health	K. Ryan, "Task Allocation and The Logic of Research Questions: How Ants Challenge Human Sociobiology," Biological Theory, vol. 14, no. 1, p. 52-68, 2018.
Potentially interfering with the health of Animals	J.O. Schmidt, Hymenoptera Venoms: Striving Toward the Ultimate Defense Against Vertebrates, New York, State University of New York Press, 1990, p. 387-387.

Potentially interfering with Plant health	A. Tufail, "Reduction of Seed Harvester Ants, Pogonomyrmex Spp. (Hymenoptera: Formicidae) Damages by Using Some Insecticides," Afr. J. Agric. Res, vol. 21, no. 2, p. 65, 2012.
Potential to disrupt Food Quality	A. Manners, "Invasive Ant Activity Exotic Invasive Ants A Threat To Business And Our Way Of Life," biosecurity capacity Journal, vol. 22, no. 3, p. 60, 2019.

To see if the harvester ant is a dangerous animal or not, the two tables above can be noticed and do a deeper analysis by comparing the two tables above with the table below.

Table 3. Comparison of Dangerous animals with harvester ants

Dangerous Animals		Harvester Ant
Dangerous Animal Criteria	Harvester Ant Criteria	Source
Wild	Yes	M. Motro, M. Uzi, D. Cohen, "Decision Making by Young Queens of The Harvester Ant Messor Semirufus While Searching for A Suitable Nesting Site," Research Article, vol. 63, no. 4, p. 615-622, 2016.
Nurtured by Humans	Yes	L. Barnett, "Dangerous Trade in Ants, Ants Are Destroying Your Plants by Nurturing," Journal of Ecology, vol. 11, no. 2, p. 31, 2021.
Reacting to stimuli	Yes	J.U. Shaharra, H.H. Richard, "Western Harvester Ants: Foraging Success and Nest Densities in Relation to Grazing Intensity," Great Plains Research, vol. 12, no. 2, p. 261-273, 2002.
Unreasonable	Yes	M. Motro, M. Uzi, D. Cohen, "Decision Making by Young Queens of The Harvester Ant Messor Semirufus While Searching for A Suitable Nesting Site," Research Article, vol. 63, no. 4, p. 615-622, 2016.
Usually hostile to Humans	Yes	K. Ryan, "Task Allocation and The Logic of Research Questions: How Ants Challenge Human Sociobiology," Biological Theory, vol. 14, no. 1, p. 52-68, 2018.

Colonizing	Yes	J.U. Shaharra, H.H. Richard, "Western Harvester Ants: Foraging Success and Nest Densities in Relation to Grazing Intensity," Great Plains Research, vol. 12, no. 2, p. 261-273, 2002.
Massive	Yes	J.U. Shaharra, H.H. Richard, "Western Harvester Ants: Foraging Success and Nest Densities in Relation to Grazing Intensity," Great Plains Research, vol. 12, no. 2, p. 261-273, 2002.
Causing harm to the Ecology	Yes	E.N. Gosselin, "Ecosystem Engineering of Harvester Ants Effects on Vegetation in A Sagebrush-Steppe Ecosystem," Journal of the Idaho Academy of Science, vol. 76, no. 1, p. 82–89, 2016.
Causing losses to the Economy	Yes	A. Manners, "Invasive Ant Activity Exotic Invasive Ants A Threat To Business And Our Way Of Life," biosecurity capacity Journal, vol. 22, no. 3, p. 60, 2019.
Causing losses to the Social	Yes	L. Barnett, "Dangerous Trade in Ants, Ants Are Destroying Your Plants by Nurturing," Journal of Ecology, vol. 11, no. 2, p. 31, 2021.
Causing damage to the Ecosystem	Yes	E.N. Gosselin, "Ecosystem Engineering of Harvester Ants Effects on Vegetation in A Sagebrush-Steppe Ecosystem," Journal of the Idaho Academy of Science, vol. 76, no. 1, p. 82–89, 2016.
Causing environmental damage	Yes	M. Motro, M. Uzi, D. Cohen, "Decision Making by Young Queens of The Harvester Ant Messor Semirufus While Searching for A Suitable Nesting Site," Research Article, vol. 63, no. 4, p. 615-622, 2016.
Negatively impacting biodiversity	Yes	A. Tufail, "Reduction of Seed Harvester Ants, Pogonomyrmex Spp. (Hymenoptera: Formicidae)

		Damages by Using Some Insecticides," Afr. J. Agric. Res, vol. 21, no. 2, p. 65, 2012.
Negatively impacting animal diversity	Yes	J.O. Schmidt, Hymenoptera Venoms: Striving Toward the Ultimate Defense Against Vertebrates, New York, State University of New York Press, 1990, p. 387-387.
Negative impact on human health	Yes	K. Ryan, "Task Allocation and The Logic of Research Questions: How Ants Challenge Human Sociobiology," Biological Theory, vol. 14, no. 1, p. 52-68, 2018.
Potentially interfering with the health of Animals	Yes	J.O. Schmidt, Hymenoptera Venoms: Striving Toward the Ultimate Defense Against Vertebrates, New York, State University of New York Press, 1990, p. 387-387.
Potentially interfering with the health of Fish	Not	-
Potentially interfering with Plant health	Yes	A. Tufail, "Reduction of Seed Harvester Ants, Pogonomyrmex Spp. (Hymenoptera: Formicidae) Damages by Using Some Insecticides," Afr. J. Agric. Res, vol. 21, no. 2, p. 65, 2012.
Potential to disrupt Food Quality	Yes	A. Manners, "Invasive Ant Activity Exotic Invasive Ants A Threat To Business And Our Way Of Life," biosecurity capacity Journal, vol. 22, no. 3, p. 60, 2019.
Potential to transmit Animal Diseases	Not	-

It can be seen from the table above that only 2 out of 20 categories of harvester ants are not the same as dangerous animals that cause harvers ants to be included in the category of animals that are dangerous to humans and humans physically and financially because Indonesia is a producer of rice and many other seed plants in Indonesia that are liked by these ants and can be feared to result in simultaneous crop failure if they come loose and multiply massively [22].

B. Why is the import of Harvester Ant ants which are considered pests in other countries still running so far and can still enter Indonesia?

According to Law Number 32 of 2009 concerning Environmental Protection and Management, Harvester Ant is included in Article 20 Paragraph (2) letter g and Article 21 paragraph

(3) letter h which explains that the phenomenon of the entry of harvers ant is included in the development of science and technology, especially this matter developed after the rise or development of ant lovers in Indonesia which has now reached thousands of people and continues to grow, The entry of ant lovers in Indonesia is pioneered by one of the youtube channels called Ants Canada which also inspires many Ants Keeper or ant lovers outside Indonesia to start developing their Hobby. From these events, it can be concluded that it is true that the development of science and technology brought this ant to the mainland of Indonesia [23].

In Law Number 32 of 2009 Article 20 Paragraph (2) letter g is continued in Article 20 Paragraph (4) that further provisions regarding environmental quality standards as referred to in paragraph (2) letters a, c, d, and g are regulated in Government Regulations. Article 21 paragraph (3) letter h is continued in Article 21 paragraph (5) that further provisions regarding the standard criteria for environmental damage as referred to in paragraph (3) and paragraph (4) are regulated by or based on Government Regulations. After conducting an analysis, it was found that Government Regulation Number 22 of 2021 concerning the Implementation of Environmental Protection and Management was the reference Government Regulation rather than the Law. Where it is also stated that in article 272 paragraph (2) letter i it is explained that in the standard criteria for Environmental Damage as referred to in paragraph (5) has not been determined, the determination of the standard criteria for Environmental Damage is carried out based on the results of studies or expert opinions, and in Government Regulation Number 22 of 2021 Article 231 paragraph (2) letter d it is also stated that there are standard criteria for ecosystem damage but in the "sea", and there is no other word that does not contain a word other than the word "sea" [24].

So I can conclude that in Law Number 32 of 2009 itself there is a mismatch for article 21 paragraph (3) letter h which should have the word "sea" after the word ecosystem or vice versa. And lastly, there are no regulated quality standards, these things ultimately cause import trade through ports and airports to still be carried out for the harvester ant itself, the standard criteria for damage and quality standards have not been regulated in Law Number 32 of 2009 Article 20 Paragraph (2) Letter g is continued in Article 20 Paragraph (4) found in Government Regulation Number 22 of 2021 concerning the Implementation of Environmental Protection and Management Living article 272 paragraph (6) which only adheres to expert testimony, as well as Article 21 paragraph (3) letter h which contains inconsistency that should have the word "sea" and no word "sea" in it, but in the Regulation of the Minister of Trade Number 12 of 2020 it has been clearly explained in article 2 paragraph (1) about what goods are not allowed to be imported. Government Regulation Number 29 of 2023 article 77 paragraph (6) has also been explained as a rejection as referred to in paragraph (1) against the Expenditure of Carrier Media of HPHK, Food, Feed, PRG, SDG, Biological Agencies, Invasive Foreign Species, Wildlife, or Endangered Animals which are prohibited by returning them to the Owner and not being issued a health certificate but in fact the import can still pass and be carried out by still using quarantine procedures. The lack of regulating regulations and ignorance about these ants as dangerous animals eventually became the main factors that caused these ants to still be imported into Indonesia.

Conclusion

Harvers ant ants are very dangerous and very invasive ants for other ants and the surrounding environment which is feared to cause crop failure for local farmers so as to cause damage to the environment and ecosystem so that these ants can be categorized as dangerous animals that should not be imported into Indonesia in accordance with the regulation of the minister of trade Number 12 of 2020. So there needs to be other regulations that complement the old regulations, as well as good enough supervision because these ants are very easy to smuggle because of their small shape so that import transactions of these ants can be prevented from entering Indonesia again. And there is a need to add regulations that refer to law Number 32 of 2009 where there is inconsistency, so that it can clarify other regulations to be more effective and better.

References

- [1] F. Latumahina, M. Gun, dan S. John, *Respon Semut Terhadap Kerusakan Ekosistem Hutan Di Pulau Kecil*, vol. 5, no. 2. Bandung: Media Akselerasi, 2019.
- [2] F. Herald, "Dangerous trade in ants, Ants are destroying your plants by nurturing perfect aphid colonies," <https://invasives.org.au/blog/dangerous-trade-in-ants/>.
- [3] A. Manners, "Exotic Invasive Ants A threat to business and our way of life," *Building the resilience and on-farm biosecurity capacity of the Australian production nursery industry*, 2019.
- [4] J. O. Schmidt, "Hymenopteran venoms, striving toward the ultimate defense against Vertebrates," *Insect defenses adaptive mechanisms and strategies of prey and predators*, hlm. 387–419, 1990, [Daring]. Tersedia pada: <https://eurekamag.com/research/038/315/038315131.php>
- [5] E. N. Gosselin dkk., "Ecosystem Engineering Of Harvester Ants: Effects On Vegetation In A Sagebrush-Steppe Ecosystem," *West N Am Nat*, vol. 76, no. 1, hlm. 82–89, 2016, doi: <https://doi.org/10.3398/064.076.0109>.
- [6] A. Tufail, H. Adugna, G. Hadish, dan M. Shewit, "Reduction of seed harvester ants, Pogonomyrmex spp. (Hymenoptera: Formicidae), damages by using some insecticides," *Afr J Agric Res*, vol. 7, no. 42, hlm. 5680–5684, Nov 2012, doi: 10.5897/ajar12.649.
- [7] H. H. Wilder, *A Synopsis of Animal Classification*. Massachusetts: H. Holt, 1902.
- [8] R. R. Miller dan W. T. Calman, "The Classification Of Animals," *Copeia*, vol. 1952, no. 1, 1952, [Daring]. Tersedia pada: <http://www.jstor.org/stable/1437611>
- [9] F. She, L. Kong, S. Nahavandi, dan A. Kouzani, "Intelligent Animal Fiber Classification with Artificial Neural Networks," *Textile Research Journal*, vol. 72, hlm. 594, Jul 2002, doi: 10.1177/004051750207200706.
- [10] C. M. Stamatis, "Justice without law: A postmodernist paradox," *Law and Critique*, vol. 5, no. 2, hlm. 265–284, 1994, doi: 10.1007/BF01371711.
- [11] L. B. Holthuis dan R. W. Ingle, "Isabella Gordon, D.SC., O.B.E.: 1901-1988," *Crustaceana*, vol. 56, no. 1, hlm. 93–105, 1989, [Daring]. Tersedia pada: <http://www.jstor.org/stable/20104425>
- [12] T. H. Huxley, "On the Classification of the Animal Kingdom," *Zool J Linn Soc*, vol. 12, no. 59, hlm. 199–226, Mei 1875, doi: 10.1111/j.1096-3642.1875.tb02582.x.
- [13] Rothschild, M. Nathaniel, R. Victor, dan Baron, *A classification of living animals*, Zoology. New York: Wiley, 1961.
- [14] B. Rosado, S. García-Belenguer, M. León, dan J. Palacio, "Spanish dangerous animals act: Effect on the epidemiology of dog bites," *Journal of Veterinary Behavior*, vol. 2, no. 5, hlm. 166–174, 2007, doi: <https://doi.org/10.1016/j.jveb.2007.07.010>.
- [15] N. A. Bezborodova, "Modern approach to the problem of clostridiosis in animal husbandry: sampling, laboratory diagnostics, prevention (overview)," *Problems of Veterinary Sanitation, Hygiene and Ecology*, vol. 1, no. 3, hlm. 392–402, Jan 2020, doi: 10.36871/vet.san.hyg.ecol.202003016.
- [16] J. O. Schmidt, "Pain and lethality induced by insect stings: An exploratory and correlational study," *Toxins (Basel)*, vol. 11, no. 7, Jul 2019, doi: 10.3390/toxins11070427.
- [17] D. A. Grasso, A. Mori, dan F. Le Moli, "Chemical communication during foraging in the harvesting ant Messor capitatus (Hymenoptera, Formicidae)," *Insectes Soc*, vol. 45, no. 1, hlm. 85–96, 1998, doi: 10.1007/s000400050071.
- [18] L. E. Lopes, E. T. Frank, Z. Kárpáti, T. Schmitt, dan D. J. C. Kronauer, "The Alarm Pheromone and Alarm Response of the Clonal Raider Ant," *J Chem Ecol*, vol. 49, no. 1, hlm. 1–10, 2023, doi: 10.1007/s10886-023-01407-4.
- [19] M. Motro, U. Motro, dan D. Cohen, "Decision making by young queens of the harvester ant Messor semirufus while searching for a suitable nesting site," *Insectes Soc*, vol. 63, Sep 2016, doi: 10.1007/s00040-016-0508-9.

- [20] S. J. Usnick dan R. H. Hart, "Western Harvester Ants' Foraging Success And Nest Densities In Relation To Grazing Intensity," *Great Plains Research*, vol. 12, no. 2, hlm. 261–273, 2002, [Daring]. Tersedia pada: <http://www.jstor.org/stable/23779570>
- [21] R. Ketcham, "Task Allocation and the Logic of Research Questions: How Ants Challenge Human Sociobiology," *Biol Theory*, vol. 14, no. 1, hlm. 52–68, 2019, doi: 10.1007/s13752-018-0308-8.
- [22] M. Sowmya, M. Balasubramanian, dan K. Vaidehi, "Classification of Animals Using MobileNet with SVM Classifier," dalam *Computational Methods and Data Engineering*, V. K. Asari, V. Singh, R. Rajasekaran, dan R. B. Patel, Ed., Singapore: Springer Nature Singapore, 2023, hlm. 347–358. doi: 10.1007/978-981-19-3015-7_25.
- [23] R. Cotterrell, "Sociological interpretations of legal development," *European Journal of Law and Economics*, vol. 2, no. 4, hlm. 347–359, 1995, doi: 10.1007/BF01541072.
- [24] G. T. Marx, "Some reflections on Undercover: recent developments and enduring issues," *Crime Law Soc Change*, vol. 18, no. 1, hlm. 193–217, 1992, doi: 10.1007/BF00230631.