Differences Bait for Lobster (*Panulirus sp*.) Catches used Traps in Pangandaran, Indonesia

Lantun Paradhita Dewanti, Rina, Mochamad Rudyansyah Ismail, Izza Mahdiana Apriliani

Fisheries Department, Faculty of Fisheries and Marine Sciences, Universitas Padjadjaran, Indonesia

ABSTRACT

Krendet are one of traditional passive fishing gear are classified as trap which have a construction of a frame, net, bait line, towing rope and ballast. Its traditional fishing gear is used by fishermen. One of the commodities caught is lobster (Panulirus sp.). Lobster has a high selling price of IDR 300,000/Kg. The use of bait on fishing on traps will increase the efficiency and effectiveness of operation traps. This research was conducted in October – November 2021 at Madasari Beach, Pangandaran Regency with the aim of identifying species composition, number and size as well as the effect of different types of bait and finding the best bait on lobster catches (Panulirus sp.) on fishing gear. The study used a method of experimental fishing with a randomized design (RAK) using five bait treatments using Chiton sp, sea snails, chicken intestines, Leiognathus sp. Trash fish, and a mixture of fish and sea snails. Each treatment was repeated five times. Data analysis used ANOVA test, normality test, and a follow-up test with an honest real difference test (BNJ) with SPSS 25. The results of the study were that there were two types of lobster species as caught (Panulirus Homarus and Panulirus penicillatus). The composition value of the catch of sand lobster has the highest percentage based on the number of 91 fish (59%). Furthermore, based on a weight of 16,593 gr (82%) in Madasari Beach, Pangandaran Regency. Different types of bait have a significant effect on the catch. Feed chiton sp. As the best bait used based on the number of catches as many as 43 individual (43.28%) and weight (g) of the catch amounted to 6,117 g (30%).

.

Keyword: - *bait, fishing gear, lobster, Indonesia, trap*

1. INTRODUCTION

According to the Department of Maritime Affairs, Fisheries and Food Security (DKPKP) of Pangandaran Regency [1], lobster production in Pangandaran Regency in 2018-2019 is 6,561.99 kg and 7,251 kg, respectively. This shows that Pangandaran has a relatively high lobster potential compared to other types of shrimp commodities [2]. This commodity is superior because it has a high economic selling value in local and international trade [3]. This is because lobster meat has a smooth meat texture and a savory and delicious taste compared to other types of shrimp, so many consumers like it [4]. Lobster prices are determined by type and size. The high selling value of lobster is a lobster that is still alive, its complete body parts are not damaged or missing. The high economic value of lobster is a motivating factor for fishermen to take advantage of it. This means that if the number of catches is small but the quality is good, fishermen will still get a high income [5].

Madasari Beach, Pangandaran Regency has waters filled with coral rocks and is the main location that has relatively high potential for lobster catches (*Panulirus sp*.). This can be seen from the lobster production data at TPI (Fish Auction Place) Madasari which is the largest compared to others in 2018-2019 (1,784.78 kg and 2,150.56 kg). One of the efforts to maintain the quality of catch is the use of good fishing gear without injuring the lobster's limbs [6].

The fishing gear used by fishermen to catch lobster are mini bottom trawl, *gill nets, and trap*. One of the *trap net* - type fishing gear used by the majority of Madasari fishermen is traditional fishing gear as known as *krendet*. Traps is a passive fishing gear and is classified as *trap* because the lobster caught is in legal size, which is above 200 grams [7]. This is in accordance with the Minister of Marine Affairs and Fisheries Regulation No. 17 of 2021 concerning Calcification of Catching and/or Releasing Lobster (*Panulirus* spp.) with *harmonized system code*

0306.31.20 in Article 7. The Fishing method of traps must use bait that contain high protein and fat also a pungent aroma to attract the attention of lobsters so that they can provide a high number of lobster catches [8]. Based on Firdaus *et al*. [9], the effectiveness for fishing using bait attractors is 60% more effective than fishing gear that does not use bait. The function of bait is not only limited to biota eating the bait but also as a medium of stimulation in the catchable area. According to Bakhtiar *et al*. [10]. the type of bait that lobsters prefer comes from *molluscs* and *echinoderms* and other animals that contain protein nutrients, especially fat.

The bait that is usually used by fishermen at Madasari Beach, Pangandaran Regency to catch lobster (*Panulirus sp*.) is a bait that comes from mollusc (sea snails and *mixed fish* or *Chiton sp.* Chicken intestine bait and *Leiognathus* fish have a high protein content and aromatic so that there is an opportunity to attract lobster [11]. The bait used requires trials to determine the efficiency of several types of bait that are good catching efforts in Madasari Beach to see the type, as well as the number and weight of lobster catches (*Panulirus sp*.) in Madasari Beach. Therefore, it is necessary to know the use of different baits. The aim of this research identifying species composition, number and size as well as the effect of different types of bait and finding the best bait on lobster catches.

2. METHOD

The method used in this research is experimental fishing. According to Bakhtiar [10], experimental fishing is a method of procuring manipulation of research objects and the existence of controls. The method has been planned to obtain new facts or corroborate or refute the results of pre-existing research.

This study used a randomized block design (RAK) with five treatments. The use of five different types of bait treatments can be seen as follows:

1. Treatment A = *Chiton sp.* and sea snails were mixed as a control
2. Treatment B = *Chiton sp*
3. Treatment C = Sea snail bait
4. Treatment D = Chicken intestine waste
5. Treatment E = *Leiognathus* sp (discarded fish)

Each of the above treatments will be repeated five times. Each repetition in question is one *setting* and one *hauling* which requires 25 *traps* in five fishing area locations that adjusts the habits of Madasari fishermen for once operation.

The data in this study used primary and secondary data. Primary data is data obtained directly from the source, (surveys, observations, participants, interviews, and documentation). Furthermore, secondary data is lobster production data from the Department of Marine Fisheries and Food Security (DKPKP) of Pangandaran Regency along with other scientific journals.

The analysis used is descriptive analysis with the approach of lobster catch composition, the relationship between length and weight of lobster catches, the effect of different types of bait on lobster catches. The hypotheses in this study are:

H_o: The use of different types of bait has no significant effect on the number of lobster catches (*Panulirus* sp.) *fishing traps*.
H_1: The use of different types of bait has a significant effect on the amount of lobster (*Panulirus* sp.) *fishing traps*.

The order of data analysis tests includes:

1. Normality test using *Kolmogorov – Smirnov*
   Significance level = 5%
   Test criteria:
   Reject H_o if sig < = 5%
   Accept H_o if sig > = 5%
2. Homogeneity test to meet the prerequisites in the Anova test analysis.
   Reject H_o if F count > F table
   Accept H_o if F count < F table
3. Further testing of BNJ (Honest Significant Difference) is carried out if there is a significant difference in the ANOVA variance test with the aim of knowing that each treatment group has a different or the same effect between one group and another.

The stages of operating the *traps* are as follows:

1. The Preparation Stage
   Operation *of the traps* begin with preparing supplies, preparing 25 units of *traps*, preparing the bait to be used, namely *Chiton* sp., sea snails, chicken intestines, and *Leiognathus* sp. trash fish with the same amount.
2. Bait Installation Stage
   Technical bait installation on *traps* is installed by tying it on the bait line on the *traps*. Each treatment of the same bait is separated from other baits that differ from *traps* one *another*. At one point of the operation location, there are five different bait treatments installed on *traps*, the location each other unit is given a distance of about ±5 m so that the aroma of the bait can spread and can provide stimulation to targeted species.
3. The Stage of Determining of Fishing Ground
   The fishing ground adjusts from the experience or habits of fishermen.
4. Setting Traps Stage
   After arriving at the fishing ground, the fishermen begin to lower weights, bodies, and towing or lifting ropes to the marker buoys. The towing or lifting rope is tied to a rope fastener such as a rock on a cliff or something else.
5. Stage of Immersing
   Immersion of traps carried out during the afternoon until the afternoon around 15.00-13.00 WIB and will be taken tomorrow at 13.00. Immersion was carried out for 22 hours by all treatments.
6. Stage of The Hauling
   Lifting traps at 13.00-08.00 WIB starts from pulling the towing or lifting rope, body, and weights. The lobster catch is put in a container or basket filled with dry sand to keep the lobster alive.

3. RESULT AND DISCUSSION

3.1. Condition of Madasari Beach Location

Based on data from the Central Statistics Agency of Pangandaran Regency (2016), the geographical location of Madasari Beach is in Masawah Village, Pangandaran Regency with coordinates 7°45'22" LS – 7°47'56" LS and 108°25'50" East Longitude – 108°30'20" East Longitude. The border areas of Masawah Village are as follows:

Northern	: Batukaras Village, Cijulang District.
West	: Cimerak Village, Cimerak District
East	: Indonesian Ocean.
South	: Legokjawa Village and Batumalang Village, Cimerak District.

The main capture fishery activity at Madasari Beach is catching lobster using *traps*, *bottom gillnet*, handline, and mini purse seine fishing gear. The map of fishing locations is shown in Figure 1.

Fig-1: Map of Research Locations
(Data Source: Google Map 2021)

3.2 Fishing Catch Composition

The percentage of total species caught from fishing gear based on weight (gr) and number can be seen in Figure 2 and Figure 2.

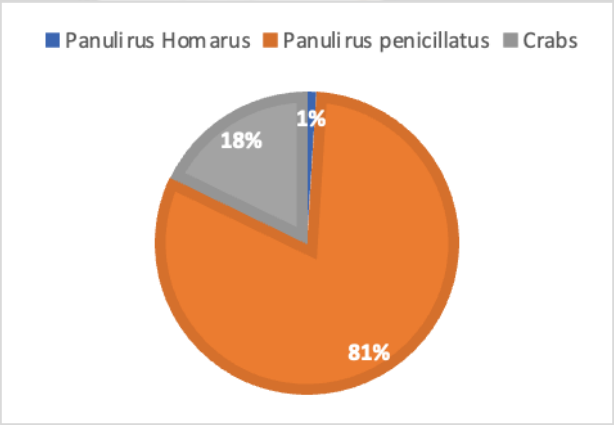

Fig-2: Graph of Percentage Weight Catch Results (gr) traps by Type of Catch
(Source: Primary Data)

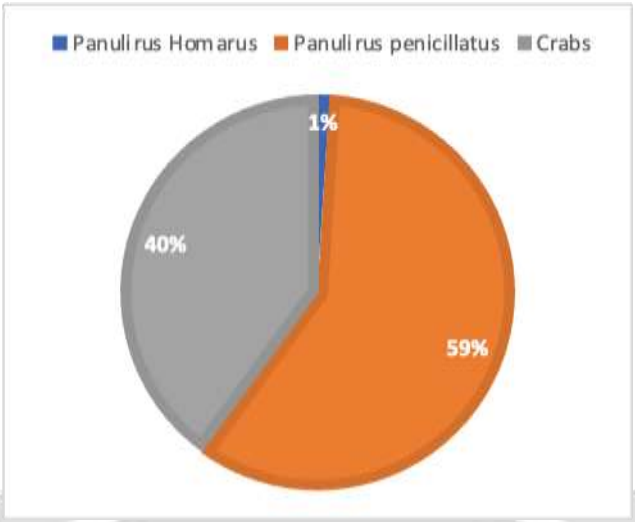

Fig-3: Graph of Percentage of Total Catch (ind) *traps* by Type of Catch
(Source: Primary Data)

Composition of catches of traps based on the number (ind) of the largest catch, *Panulirus homarus* as many as 91 ind (59%), followed by crab as many as 61 ind (40%) while the smallest catch was one rock lobster with a percentage of 1%. The catch based on weight (gr) during the *Panulirus penicillatus*, research got the largest amount of weight (16,593 gr or a percentage of 82%) with an average weight value of 182 gr, then followed by crab getting a total weight of 3,573 gr or a percentage of 17% with an average weight value 59 grams, while the smallest catch, namely rock lobster, received a total weight of 156 grams or a percentage of 1% with an average weight value of 156 grams. Based on the explanation of the lobster percentage value, the main catch are *Panulirus homarus, Panulirus penicillatus*, while bycatch is crab (*Cancer antennarius*).

(a) (b)

Fig-4. *Panulirus homarus (a)* and *Panulirus penicillatus* (b) as Main Catch
(Source: Primary Data)

a) *Panulirus homarus*

According to Muzayanah [11], the classification of *Panulirus* homarus is as follows:

Kingdom : Animalia
Phylum : Arthropoda
Class : Crustacea
Order : Decapoda
Family : Palinuridae
Genus : Panulirus
Species : *Panulirus homarus*

Fishermen call *Panulirus homarus* by name green lobster because the basic colour of its body is green. The carapace part is filled with large and small spines, there are a pair of antennules with white spots and at the ends, there are pointed spines covered with thin hairs, the tail can be moved freely like a fan, there is a shell segment on the abdomen and there are white dots on each segment divider, there are Also the bigger dots on the right and left edges also have light orange fur. These characteristics indicate that the lobster belongs to the *Panulirus homarus* species.
The carapace of the sand lobster is round and spiny, there are four large spines on the anterior and a pair of thorny horns measuring approximately twice the length of the eye. The color of his eyes is dark brown. The posterior part has a fan-shaped and flexible tail. The anterior part of the carapace and around the eye is bright orange. The foot of the road is white with irregular patches. According to Hargiyatno [13] the distribution of the sand lobster area is along the South Coast of Java. These lobsters are usually caught at a depth of 1-5m in rock holes and sandy corals in large groups.

b) *Panulirus penicillatus*
According to Verianta [14], *Panulirus penicillatus* are as follows:
Kingdom : Animalia
Phylum : Arthropoda
Class : Crustacea
Order : Decapoda
Family : Palinuridae
Genus : Panulirus
Species : *Panulirus penicillatus*

Body parts *Panulirus penicillatus* greenish-red base with transverse brown strokes. The carapace is covered with large and small spines, there is a pair of antennules filled with thorns with pointed spines at the ends wrapped in thin orange fur, the tail can be moved freely like a fan, there are alternating segments of shell on the abdomen greenish-red. These characteristics indicate that the lobster belongs to the *Panulirus penicillatus*.
Rock lobster carapace is round and spiny, there are four large spines on the anterior and a pair of thorny horns. The posterior part has a fan-shaped tail that can move freely. His eyes are dark blue to brown. The foot of the road has a faint white line. According to Verianta [14], this lobster usually inhabits shallow waters with a depth of 1-4m with clear water and strong currents.

3.3 Differences in Bait Types on Catches

The bait used in this study consisted of five different types of bait, there are a mixture of *Chiton sp.* and sea snails, *Chiton sp*., sea snails, discarded fish, and intestines.

1. *Chiton sp.*
   According to Karunianingtyas [15], the classification of *Chiton sp.* is as follows:
   Phylum : *Mollusca*
   Class : *Polyplacophora*
   Order : *Chitonida*
   Family : *Chitonidae*
   Genus : *Chiton*
   Species : *Chiton sp.*
   Chiton sp. (Figure 5) has a shell of 8 pieces and is arranged like a tile, has a variety of colours, including greenish-purple, has an elliptical body shape. This species is found on coral or larger shells in shallow attached water. The protein content is 18.86% higher than the protein found in sea cucumbers (7.67%), mussels (11.27%). Therefore *Chiton sp.* is considered as a source of animal protein from the sea [16].
2. Sea Snail
   According to Tazkia *et al*. [17] as follows:
   Class : Gastropods
   Subclass : Prosobranchia
   Family : Turbinidae
   Genus : Turbo
   Species : *Argyrostoma linnaeus*
   These sea snails (Figure 5) inhabit habitats in coastal areas facing directly to the waves and like coral reef flats. This snail has the general characteristics of a fairly thick shell, small to medium size, thick operculum,

and quite thick calcification, and part of the operculum emerges from the mouth of the shell. The chemical content of sea snails is 63.37% protein, 27.01% carbohydrates, 0.08% minerals, 0.08% amino acids [17].

3. *Leiognathus sp*. (Discarded fish)
   According to Prasetya [18] the classification of sea snails is as follows:
   Kingdom : Animalia
   Phylum : Chordata
   Class : Vertebrates
   Order : Pereomorphi
   Division : Perciformes
   Family : Leiognathidae
   Genus : Leiognathus
   Species : *Leiognathus sp*.

   Leiognathus sp. has the main characteristic of silvery-white with a flat shape, small, and less than 10 cm in length. *Leiognathus sp*. fish live in shallow waters by forming schools The chemical content of *Leiognathus sp*. fish is quite good, consisting of water (74.54%), crude protein (17.12%), fat (3.30%), ash (5.56%), calcium (1.58%), phosphorus (0.89%) [18].
4. Chicken Intestine
   Intestine so far only where used as an additive in human food that is not yet optimal. In general, the intestine is only disposed of as waste from chicken slaughter, it turns out that the intestine has enough nutritional content that has the potential to be used as bait.
   Intestines (Figure 5) used are intestines that are more than two days old and have a pale bluish colour and have a foul odor that is no longer fit for consumption so that they can attract the attention of lobsters. Intestine contains collagen (65.90%), fat (5.60%), protein (22.9%), minerals (6.68%) [19].

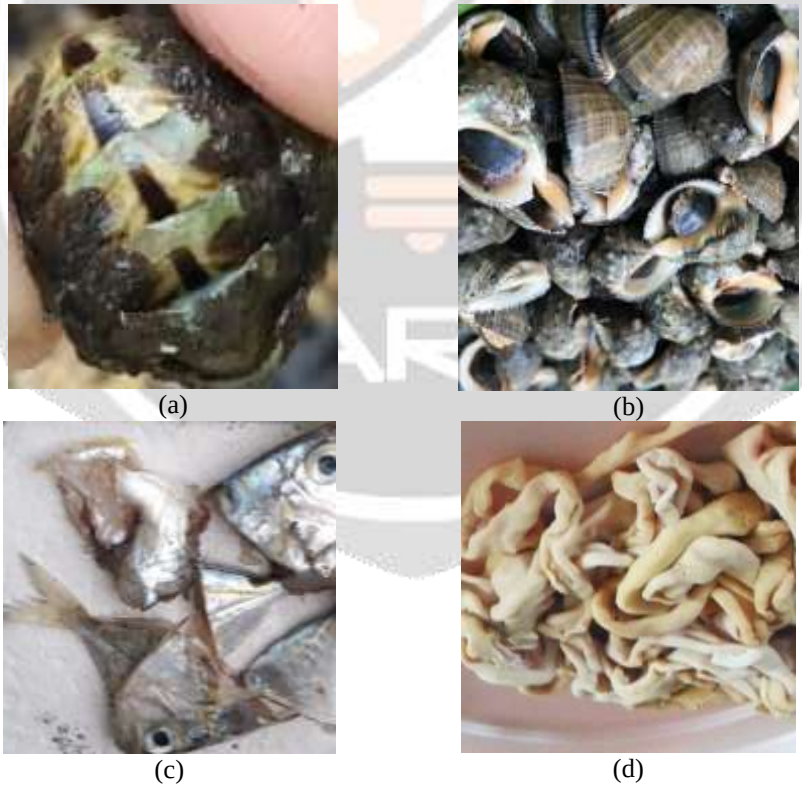

Fig-5: Types of Bait consist of Chiton sp., Sea Snail, Discarded Fish and Chicken Intestine (Source: Primary Data)

There is data on the total number of main catches and bycatch (bycatch) based on number and weight (gr) in Table 1.

Table-1: Total Traps Catch Based on Weight (grams) and Total (Ind)

	Sea Snail and Chiton		Sea Snail		*Chiton sp*		Intestines		Discarded Fish	
	grams	ind	grams	ind	grams	ind	grams	ind	grams	ind
1	966	7	1386	8	348	5	400	2	200	1
2	1044	8	1465	10	610	3	666	5	360	2
3	1506	11	859	8	668	6	466	6	473	6
4	715	5	845	7	620	4	812	6	655	7
5	1018	7	1562	10	1138	7	754	6	786	6
Total	5249	38	6117	43	3384	25	3098	25	2474	22
Avrg.	1049.8	7.6	1223	8.6	676.8	5	619.6	5	494.8	4.4

(Source: Primary Data)

Based on the data above, it shows the total catch of *traps* during the study using five different types of bait. The biggest catch, both in grams and individu, was using 43 fish bait *6,117* grams. Other baits were a mixture of 5,249 grams, followed by 25 sea snail baits with 3,384 grams, then intestine bait of 25 ind weighing 3,098 grams, and Leiognathus sp (discarded fish bait) of 22 ind. (2.474 grams)

3.4 Normality Test

The results of the normality test based on the weight (grams) of lobster catches are in Table 2.

Table-2: Normality Test of Lobster Catches Based on Weight (grams)

Treatment	Kolmogorov-Smirnov[a]		
	Statistic	df	Sig.
Sea Snail and *Chiton sp*	0.25	5	0.20*
Chiton sp	0.21	5	0.20*
Sea Snail	0.26	5	0.20*
Intestine	0.28	5	0.20*
Leiognathus sp (Discarded Fish)	0 ,23	5	0.20*

(Source: Primary Data Tested with *SPSS 25*)

Based on the results of the normality test table that the total weight (grams) of the *traps* (grams) for five repetitions with catfish and sea snail bait obtained a significance value of 0, 20, *0.20*, chicken intestine bait 0.20, and *Leiognathus* sp trash fish bait 0.20. The feed distribution data based on weight (grams) has been normally distributed by seeing a significance greater than 0.05 (5%), so the data is said to be good to be able to continue the homogeneity test. This is in accordance with [20] that if the data is normally distributed, it can be said to be good and can be continued with parametric statistical tests, but if the data obtained are not normally distributed, then parametric statistical tests cannot be continued.

3.5 Homogeneity Test

The results of the homogeneity test based on weight (grams) of total lobster catches are in Table 3.

Table-3: Homogeneity Test of Lobster Catches Based on Weight (grams)

Levene Statistic	df1	df2	Sig.
2.27	4	20	0.09

(Source: Data Primary *SPSS 25*,

The total weight (grams) of lobster catches has a significance value of 0.09. This is in accordance with Kusuma *et al*. (2012) that good data is homogeneous because the significance value is greater than 0.05 or 95% confidence interval so that the ANOVA test can be continued

3.6 Two Way Anova Test

Test The Two Way Anova based on data on the weight of lobster catches from *traps* can be seen in Table 4.

Table-4. Two Way Anova Test Lobster Catch Results Based on Weight (grams)

Source of Variation	SS	df	MS	F calculate	P-value	F table
Rows	324924.40	24.00	13538.52	2.13	0.06	1.99
Columns	169945.11	4.00	42486.28	6.59	0, 00	2.80
Error	819396.14	96.00	8535.38			
Total	1314265.65	124.00				

(Source: Primary Data *SPSS*)

Analysis results based on groups or fishing areas The Fcount value is 2.13 and the Ftable value is 1.99 with a significance value of 0.06, so that the Fcount > Ftable, the hypothesis is H1 is accepted and H0 is rejected, meaning that the fishing area significantly affects the total weight of lobster catches. Furthermore, based on the treatment or bait used, the Fcount value is 6.59 and the Ftable value is 2.80 with a significance value of 0.00, then the hypothesis is H1 is accepted and H0 is rejected, meaning that the use of bait affects the total weight of lobster catches significantly. Based on the results of the study, the fishing area got the catch of sand lobster with the largest total weight of 6513.40 gr. This is because the area is the habitat of sand lobsters which are at the bottom of the waters in coral and sandy rocks. They live in large groups so they are easy to catch [7].

4. CONCLUSIONS

1. There were two types of lobster species for five repetitions with five different types of bait, *Panulirus homarus* and *Panulirus penicillatus*. The composition value of the catch of sand lobster has the highest percentage based on the number of 91 fish (59%). Furthermore, based on a weight of 16,593 gr (82%) at Madasari Beach, Pangandaran Regency, Indonesia.
2. Different types of bait have an effect on lobster catches seen from the *two-way* Anova the value of Fcount>Ftable or significance value <0.05, meaning that H1 is accepted and H0 is rejected, so that the difference in bait has a significant effect on the catch.
3. *Chiton* sp as the best was used based on the number of catches as many as 43 ind (43.28%) and the weight (grams) of the catch of 6.117 grams (30%).

6. REFERENCES

[1] Department of Marine Fisheries and Food Security Kab. Pangandaran (DKPKP). Catch Production Data. Pangandan Regency: *DKPKP Kab. Pangandaran* (2019).

[2] Department of Marine Fisheries and Food Security Kab. Pangandaran (DKPKP). Catch Production Data. Pangandan Regency: *DKPKP Kab. Pangandaran* (2020).

[3] Asvin, MR, IW Restu, and R. Ekawaty, R. Composition of Types and Sizes of Lobster (Panulirus sp.) Captured at Yeh Gangga Beach, Tabanan Regency and Canggu Beach, Badung Regency, Bali Province. *Current Trends in Aquatic Science* 2(1) (2019) 108–114.

[4] Mubin, AF, H. Boesono, and Sardiyatmo. Differences in Traps Shape and Immersion Time on Lobster Catches (Panulirus sp.) in Cilacap Waters. *Journal of Fisheries Resources Utilization*

Management and Technology 2 (2) (2013) 27–34.

[5] Jayanto, B., A. Rosyid, H. Boesono, and F. Kurohman. The Effect of Coloring on the Frame and Body of Traps Nets on Lobster Catches in Wonogiri Waters. *Indonesian Journal of Fisheries Science and Technology* 10(2) (2015) 68–73.

[6] Khikmawati, LT., and H. Boesono. The Effect of Differences in Operation Time and Slope of Bubu Walls on Lobster (*Panulirus sp*) Catches in Argopeni Waters, Kebumen Regency. *Journal of Fisheries Resources Utilization Management and Technology* 4 (2) (2015) 83–92.

[7] Rombe, KH, Y. Wardiatno, and L. Adrianto. Lobster Fishery Management with EAFM Approach in Pelabuhan Ratu Bay. *Journal of Tropical Marine Science and Technology* 10 (1) (2018) 231–242.

[8] Kusuma, RD, Asriyanto, and Sardiyatmo. Effect of Depth and Different Bait on Catching Lobster (Panulius sp) With Lobster Net (Bottom Gill Net Monofilament) in Argopeni Waters, Kebumen Regency. *Journal of Fisheries Resources Utilization Management and Technology* 1 (1) (2012) 11–21.

[9] Firdaus, I., ADP Fitri, S. Sardiyatmo, and F. Kurohman. Analysis of Fishing Equipment Based on Code of Conduct for Responsible Fisheries (CCRF) at Fish Auction Place (TPI) Tawang, Kendal. *Indonesian Journal of Fisheries Science and Technology* 13(1) (2017) 65–74.

[10] Bakhtiar, E, H Boesono, and Sardiyanto. 2014. The Effect of Time Differences and Bait Catching Lobster (*Panulirus sp*.) with *Traps Catching* (Trap Net) in Watukarung Waters, Pacitan Regency. *Journal of Fisheries Resources Utilization Management and Technology* 3(3) 168–175.

[11] Zalzati, JI., Zulkarnain, and S. Martasuganda. Using Fish Trash as Bait Atractor due to Catch of Fish by the Floating Liftnet in Palabuhanratu Bay. *Journal of Albacore* 3 (1) (2019) 13–23.

[12] Muzayanah, L. 2018. *The Effect of Different Types of Bait on the Krendet Fishing Tool (Trap Net) on Lobster (Panulirus sp.) Catches in Kalak Village, Donorojo District, Pacitan Regency.* Tesis. Malang: Universitas Brawijaya.

[13] Hargiyatno, I. T., F. Satria, A. P. Prasetyo, dan M. Fauzi. 2013. The Relationship between Length and Weight and Condition Factors of Sand Lobster (Panulirus homarus) in Yogyakarta and Pacitan Waters. *Jurnal Bawal Widya Riset Perikanan Tangkap*, 5 (4): 41–48.

[14] Verianta, M. 2016. Various *Lobster at Baron Beach Gunungkidul, Yogyakarta*. Tesis. Yogyakarta: Techobiology Faculty.

[15] Karunianingtyas, T. 2016. *Identification of Molluscs in Payangan Beach, Ambulu District, Jember and Their Use as a Guidebook*. Tesis. Jember: Universitas Jember.

[16] Sjafrie, N. D. M. 2010. A review of Chiton. *Journal Oseana*, 14 (2): 37–45.

[17] Tazkia, R., I. T. Maulana, dan L. Purwanti. 2016. Analysis of Fatty Acid Content of Oxeye Snail (Turbo argyrostoma L.) and Brown Seaweed (Sargassum sp) by Method KG-SM. *Proceeding Seminar Pharmachy*, Bandung. p. 559–565.

[18] Prasetya, a. *Fortification of jackfruit seeds (Artocarpus heterophyllus) and fish bones of Leiognathus sp. As ingredients for processed wet noodles.* Diss. UIN Raden Intan Lampung, 2019.

[19] Defriyanti, Y. 2018. *Increased Production and Quality of Kroto by Utilizing Kepok Banana Peel and Chicken Intestines as Alternative Feed*. Thesis. Lampung: Fakultas Tarbiyah dan Keguguran Universitas Islam Negeri Raden Intan Lampung.

[20] Usmadi. Testing Requirements Analysis of Homogeneity Test and Normality Test. *Journal Educational Innovation* 7 (1) (2020) 51–62.