EXPERIMENTAL TRAP FISHING FOR ATTRACTING LOBSTER BY RUMINANTIAL SKIN AS THE BAIT

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Except the strong smell to attract lobster, goat skin facilitates the need of protein, lipid and water as food of lobster. Goat skin also facilitates chitin which is needed by lobsters for molting. Based on those items, experimental fishing was done to compare the effectiveness between goat skin in one hand and the traditional "*krunken*"(chiton) in another hand, as bait to lure lobster with traditional gear "*jaring krendet*" (framed lobster entangling trap net).

The result showed that the trap baited by goat skin catched twice much more than those lured by the traditional bait "*krunken*" (chiton).

Introduction

Lobster are known as marine crustacean, which are large, hardy and benthic animals which are not hard to recognize them. Many are found in relatively shallow waters, especially in coral reefs area. We do know, that lobster, are among prized of fisheries resources and significant commercial in many countries. (Gunarso [4])

In Indonesia, lobster are catched by a various kinds of gear such as trammel net, monofilament gillnet, multifilament gillnet, lobster long line, danish seines such as *dogol*, beach seine such as *jaring arad* and also by certain kinds of trap nets such as lobster pots, bottom creels and angling fisheries. In some part of Indonesia, it catched by diving (hand-collection without gear or by spears). (Moosa and Aswandy [5]). In Baron water area, southern part of Yogyakarta, lobster are commonly catched by a kind of frame lobster entangling net, which is locally named as "*jaring krendet*". This kind of trap net are baited by "*krunken*" (chiton) to attract the lobsters to come to the trap net, since the fisherman there know that this crustacean animals are mostly fed on molluscans and echinoderms respectively. (BPPI [2])

Among the 7 kinds of lobster species which are commonly catched in Indonesia waters and are economically important and valuable commodities of lobster fisheries in Indonesia, Baron water, where this experimental lobster fishing was done, 5 of those economically valuable lobsters are found and catched by local fishermen of Baron area. These lobsters are *udang karang hijau/kendal* (*Panulirus versicolor*), *udang karang batu* (*Panulirus penicillatus*), *udang karang pantung/pasir hijau* (*Panulirus homarus*), *udang karang mutiara/kentangan* (*Panulirus ornatus*), and other species named *udang karang bunga* (*Panulirus longipes*). (Dinas Perikanan Daerah Tingkat I Yogyakarta [3]).

Goat skin is one kind of ruminantial skin. Except its strong smell, freshly goat skin possesses chemical compositions of proteins, lipids, minerals, water and chitin. The percentages of each component are as follow : (Wahyudin [6]) :

Table 1. Chemical compositions ruminantial skins

Component	Composition (%)
Water	60.0 – 65.0
Proteins	30.0 – 33.0
Minerals	0.3 – 0.1
Lipids	5.0 – 2.0
Chitin	2.0 – 0.2

Resource : Balai Penelitian kulit, 1982

If we use that goat skin as bait of *krendet* net to lure lobsters, the strong badly smell of it will attract the lobsters to come and to accumulate on *krendet* net. The lobsters can feed on the skin directly, since the presence of proteins, lipids, water and minerals as their foods, while the presence of chitin in the ruminantial skin will facilitate the need of chitin. We do understand, that a lot of chitin is needed by the lobster during molting. Lobsters as we know, will molting many times during each of their development stages of their life. Even when they have mature already.

Base on those items, this experimental fishing is aimed to study the effectiveness of using ruminantial skin (in this case goat skin) in compare with the traditionally bait, the *krunken* (chitin) as bait to lure lobster to come and to be trapped by the *krendet* nets of Baron water.

Methods

This experimental fishing was done far 30 days (July 30 – August 31, 1998), though actual experiment just only could be done far only 10 days (repetitions).

10 units of *krendet* net were used. 5 units of it were baited by fresh goat skin, while the other 5 units were baited with "*krunken*" (chiton). The traditionally used bait for *krendet* net of Baron area (as treatment).

Each of the *krendet* net was sank into the water individually, and the space between one *krendet* net to the neighbor hood *krendet* net was 5 meters.

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Data collected concern with kinds of species, their weight and their amounts of each experimental treatments. After then, the data was tabulated. To analyze the different in catch of each treatments those baited by fresh goat skins and those baited by *krunken* (chiton) by using student test analyzing method. The result at the experimental analysis the to be descripted to aim the experimental goal.

Results and Discussion

The catches of both for the 5 *krendet* nets baited by the goat skin, as well as those the 5 *krendet* nets baited by the "*krunken*"(chiton) are dominated by three kinds of lobster species of udang karang mutiara (*Panulirus ornatus*), udang karang hijau (P. *versicolor*), and udang karang batu (P. *penicillatus*).

Total weight of each of the different treatment was 23.062 grams for those which were baited by goat skin and 13.968 grams for those *krendet* nets baited by "*krunken*".

The detail data of catch of those *krendet* nets baited by goat skin could be seen in Table 2, while those for the catch of *krendet* nets baited by "*krunken*"were presented in Table 3.

Table 2. Kinds of lobster species captural with goat skin

Kinds of Lobster	weight (gr)	Percentage (%)	Number of lobster	Percentage (%)
P. ornatus	10.	44	2	49
	260		8	
P. versicolor	7.4	32	1	30
	20		7	
P. penicillatus	5.3	23	1	21
	82		2	
Total	**23.**	**100**	**5**	**100**
	062		**7**	

Table 3. Kinds of lobster species captural with "*krunken*" (chiton)

Kinds of Lobster	weight (gr)	Percentage (%)	Number of lobster	Percentage (%)
P. ornate	7.252	51	14	47
P. versicolor	4.126	30	10	33
P. penicillatus	2.590	19	6	20
Total	**13.968**	**100**	**30**	**100**

As it can be seen from table mentioned, the catches of those two kinds of treatment, the catch of *krendet* nets lured by *krunken* (chiton) were less than these *krendet* nets that lured by the goat skin.

Table 4. Average weight (gr) of catch of each treatment

No	Goat Skin		*Krunken*	
	Weight (gr)	number of lobsters	Weight (gr)	number of lobsters
1	2.376	6	1.428	3
2	2.362	6	1.420	3
3	2.384	6	1.384	2
4	2.246	6	1.392	3
5	2.408	5	1.378	3
6	2.186	6	1.368	4
7	2.414	6	1.430	3
8	2.238	5	1.430	3
9	2.230	5	1.424	3
10	2.240	6	1.314	3
Total	**23.062**	**57**	**13.968**	**30**

More over, the statistical analysis done showed that the catch of those *krendet* nets lured by goat skin was significantly different (95%) *krunken* (chiton) in compare with those *krendet* nets lured by *krunken* (chiton).

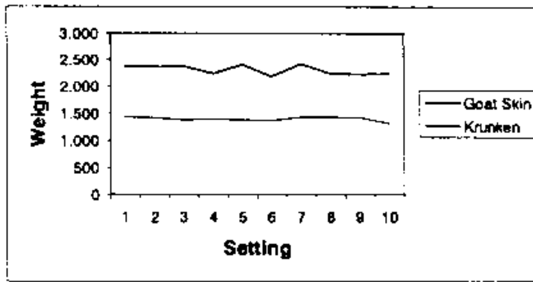

Fig 1. Average weight (gr) of catch of each treatment

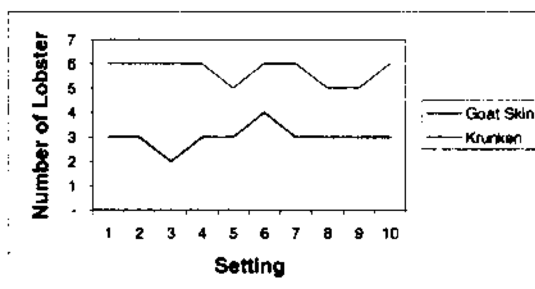

Fig 2. Number of catch of each treatment

Conclusion

Concered with the experimental fishing done, it was shown that:

The catches of those two different treatments done, were completely different. Those treated by goat skin gained 57 lobsters weight 23.062 gram, and those treated by *krunken* gained only 30 lobster weight 13.968 gram.

Statistical analysis done for concerned with the weight of the catches of those the kinds of treatment was significantly different (95%). Its was shown that the total weight of catcher of *krendet* net lured by goat skin were higher than those lured by chiton.

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Appendix 1.

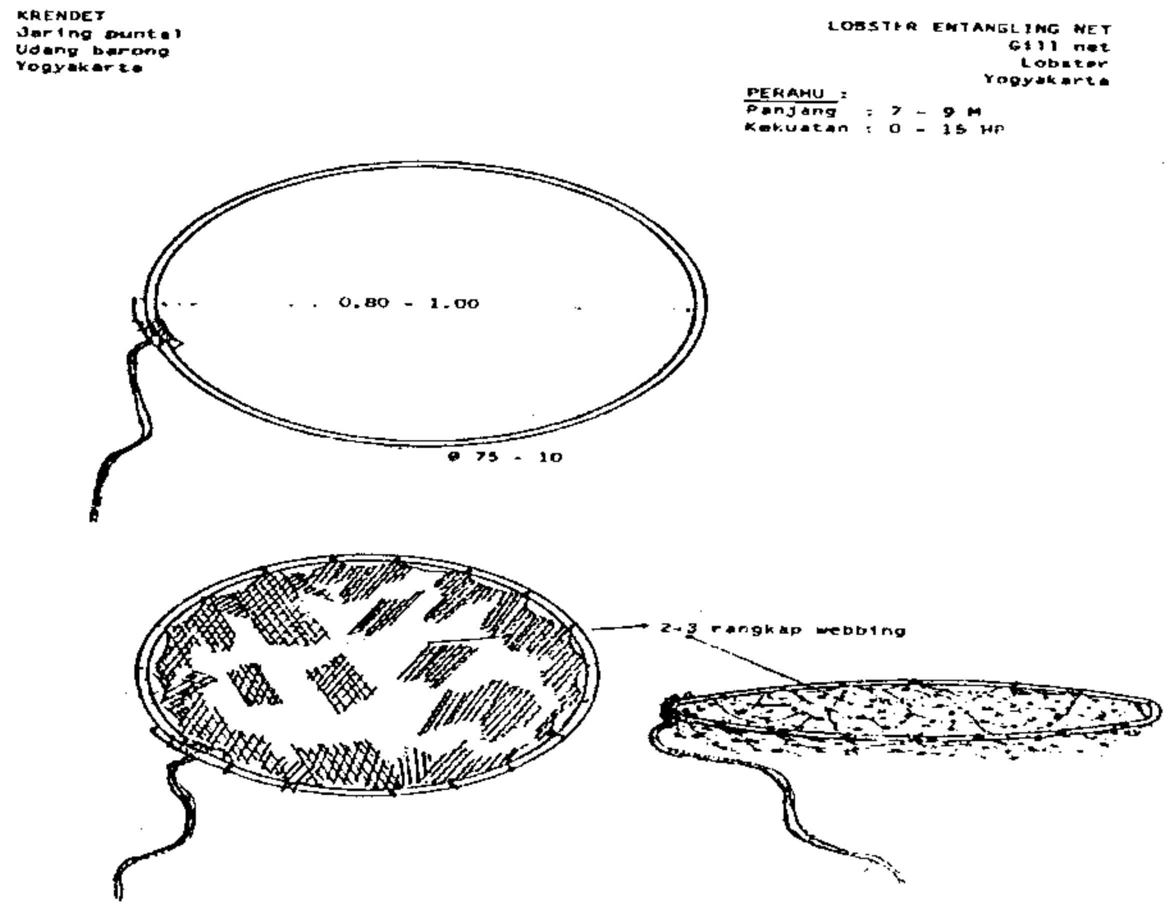

Fig 3. *Krendet* Nets