ETHNOGRAPHIC DATA ON MOLLUSK COLLECTION ON THE NORTH COAST OF PERU

In this report **Daniel H. Sandweiss** (The University of Maine, daniels@maine.edu) makes available the data from his Yale University senior research project.

Author's Note:

The following essay on shellfish collection on the North Coast of Peru was part of my senior research project at Yale University, written in the 1978–1979 academic year based on interviews with mollusk collectors (Sandweiss 1979) that are reported following the essay. I have not updated the essay or the interview notes other than bringing species names into conformity with current usage based on precedence, aligning place names with Gabriel Prieto's article in this volume of *Andean Past* (Prieto 2024), fixing spelling and translation errors, making minor changes to enhance clarity of expression and to conform to *Andean Past* house style, adding a map (Figure 1), and changing references to "last summer" to "the summer of 1978". I know that much important research has been done in this field since 1979, but to maintain its status as a historical artifact, I left the text unchanged apart from what is noted above. Readers should review Prieto's article for a current view of the topic. I have only reproduced one illustration from my report (Figure 2), because better versions of the same subjects are generally available in Prieto (*ibid.*).

In 1978, when I carried out the interviews, Institutional Review Boards (IRBs) were not part of university processes, outside, perhaps, of the medical field. In a historical review of IRBs, Grady (2015:1150) writes:

> The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, established by the US Congress after revelations of the US Public Health Service syphilis studies at Tuskegee, authored the Belmont Report which explicated ethical principles underlying the conduct of human subjects research.[1] The Commission's contributions, including integration of the Belmont principles, were incorporated into updated US regulations in 1981. The 1981 DHHS regulations were subsequently adopted by 16 federal agencies (not including the FDA) in 1991 as the Common Rule. The FDA required an IRB beginning in 1981 (Title 21 Code of Federal Regulations, part 56), although some investigators funded by pharmaceutical companies already used oversight committees.[2]

I did not, and could not have, obtained IRB approval in 1978, because it was not available for anthropological studies at that time. To protect interviewees' privacy, I have replaced their names with codes in the following essay and interview notes.

[1] "The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. The Belmont Report: Ethical Principles and Guidelines for the Protection of Human Subjects of Research. Washington, DC: Department of Health Education and Welfare; 1979. DHEW Publication OS 78-0012 1978." Footnote 9 in Grady 2015:1154.

[2] "Bowen, A., Models of Institutional Review Board Function". In: *The Oxford Textbook of Clinical Research Ethics*, edited by Emanuel, Ezekial J., Christine Grady, Robert A. Crouch, Reider Krummradt Lie, Franklin G. Miller, and David Wendler, pp. 552–559. New York: Oxford University Press (2008)." Footnote 10 in Grady (2015):1154.

1979 Text

The ethnography of shellfish collection and use has received little attention from anthropologists or archaeologists, despite the importance of this activity among many prehistoric cultures. Clement W. Meighan has written that "students of culture history cannot ignore the past existence, over most of the world, of a type of culture primarily dependent on shellfish as a staple food" (Meighan 1969:415). Even if the existence of these cultures has not been ignored, at least one potential source of data about them has received far too little attention. Much vital information on cultures primarily to marginally dependent on shellfish can be obtained from the study of living traditional collectors.

If we are to gather more data on traditional collection and use of mollusks, then we must do so at once. As an indication of the encroachment of modern technology on traditional exploitation techniques, Ransom (1946:609–610) noted a practice among Aleuts of backing powerboats into the shore and using the engine thrust to throw clams out of the sand. Several large bags can be filled in as little as five minutes by this method; consequently, other species of mollusks are no longer collected.

Old records and articles probably contain some ethnographic data on shellfish collection and use, demanding a careful and specific search. Most likely, as in the case of the North Coast of Peru, such information is scattered and fragmentary. Only a few major articles by trained researchers have appeared in the literature; Bigalke and Voight's work in South Africa provides the most complete information on a traditional shellfish gathering system (Bigalke 1973; Bigalke and Voight 1973; Voight 1975). Shawcross, in New Zealand, has made interesting use of ethnographic data on Maori shell collecting to reconstruct prehistoric population and seasonal movement (Shawcross 1970), and Greengo (1952) recorded useful data on shellfish in California Indian cultures. Despite these beginnings, however, we must retrieve or record much more information before we can make any hypotheses about the presence or absence of specific or general patterns in traditional shellfish utilization. Only when the database for such hypotheses exists will we be able to make predictions about the prehistoric response to molluscan resources.

For the North Coast of Peru, only two accessible sources have accounts of traditional shellfish collecting. Gillin's (1947:36) study of a Moche village has one sentence which covers all shoreline collection, while Pozorski (1976:212–216) makes several references to the subject in relation to Huanchaco village. Sánchez Romero (1973:254–281) comments on a number of economically important mollusks, but none of them are among the species currently collected in the North Coast valleys visited during my survey.

The questionnaire was originally designed with the help of Dr. Michael Moseley and Dr. Shelia Pozorski, both of the Programa Riego Antiguo based in Trujillo, Peru. Carlos Elera, a Peruvian archaeology student, and Alfredo Narváez, an excavation supervisor at Chan Chan, assisted me in translating the original English version into a useful Spanish text. The English version presented here is a direct translation of the Spanish questionnaire, since the latter was modified to make the questions more meaningful to the informants. The Spanish text and translations of Carlos Elera's detailed notes for all the interviews appear after this essay.

Figure 1: Map showing North Coast locations mentioned in the text.

Shellfish Collection Questionnaire, English Translation

I. *Information about the informant*
- A. 1. Name of the informant
  - 2. Age
  - 3. Occupation
  - 4. Place of interview
- 5. How many years have you lived in this place? In what other places have you lived?
  - 6. Sex
  - 7. Where were you born?

- B. If not presently a shellfish collector
  - 1. Were you always a fisherman?
  - 2. Are you from a family of fishermen?
  - 3. If the answer to B.1. or B.2. is yes, where, when, and how often have you fished, collected shellfish?
- C. 1. Is the informant a "traditional" fisherman or collector?

II. *General information on the mollusk*
- A. 1. Scientific name
  - 2. What is the name of this shellfish? (Common name)

III. *Spatial distribution*
- A. 1. Is this shellfish collected along the entire coast?

- B. 1. Can this shellfish move itself?
  - a) If yes, fast or slow? When do they move?
- 2. Where do you get the shellfish?
  - a) In sand?
  - b) From the rocks?
  - c) In the water?
  - d) At what depth in the water and/or in the sand?
  - e) When the tide is high or low?
- 3. Do you find the shellfish with other things? (algae, other species of shellfish, fish?)
- 4. Do you find the shellfish in or near river mouths?

IV. *Temporal availability*
- A. Physical phenomena governing availability
  - 1. Does El Niño cause a greater or lesser collection of shellfish?
  - 2. Do the seasons have an effect?
  - 3. Do the tides have an effect? The moon? The stars?
  - 4. Do you collect the shellfish in calm water or in rough water?

B. Social phenomena governing availability
   1. Who habitually gathers the shellfish? (Women? Children? Fishermen?)
   2. In which months do you collect more shellfish? Why?

C. General information on availability
   1. Do you collect shellfish all year-round? If not, why not?

D. Trends through time
   1. Years ago (in the past), were there more shellfish?

E. Changes in appearance
   1. Do the shellfish change during the year? (microcycle)
   2. Do the shellfish change from one year to the next? (macrocycle)

V. Preservability

A. Natural
   1. How long do the shellfish stay alive after being collected?
   2. How long are they edible after collection?

B. Methods of preservation
   1. How are the shellfish (meat) conserved?
      a) In water?
      b) By drying?
      c) With salt?
      d) In ice?
   2. What methods do you use to preserve the shellfish meat when it is sent long distances to be sold?

VI. Regeneration

A. 1. Are there always the same beds of shellfish? (In the same place?)
   2. Do you collect all that you can? The little ones as well?

VII. Collection

A. The collectors
   1. Who collects the shellish? Why these persons? Is it necessary to be a specialist in shellfish collection?

B. How
   1 How do you collect the shellfish? (How do you get them from the rocks? the sand? the water?)
   2. Do you need special tools?
   3. What kind of containers do you need for the shellfish?

C. Quantity
   1. How much do you collect each time? How many times do you collect per day? Per week?
   2. How many shellfish per kilo?
   3. How long does it take to collect a kilo?
   4. How long does it take to carry them to your house?

VIII. Utilization

A. Who eats them?
   1. Do you collect the shellfish to eat yourself or to sell?
   2. If collected for self-consumption:
      a) How do you open the shellfish to eat them?
      b) How do you clean them?
      c) How do you prepare and cook the shellfish?
      d) How many shellfish do you need for each person per meal or per day?
      e) With what other foods do you eat the shellfish?

3. In a market
    a) How are the shellfish transported to the market?
    b) How much are the collectors paid per kilo?
    c) How much are the transporters paid per kilo?
    d) How much are the vendors paid per kilo?
    e) In the market, who buys the shellfish?
    f) At what price do you sell the shellfish?
    g) Do you know how to prepare the shellfish?

B. Other uses
    1. Do you use shells or shellfish as medicine?
    2. Do you use the shells as decorations?
    3. Are there superstitions connected with the shellfish?

Carlos Elera accompanied me on all of the interviews, and after finding a suitable informant, he would carry out the interview in Spanish, recording the informants' replies. Immediately afterwards, he would help me translate the responses into English. The interviews themselves took place in a variety of locales including the beach, a cantina, and private homes.

The summaries which follow cover each species or group of species collected today on the North Coast of Peru between the Virú and Lambayeque Valleys. The information comes from the six interviews, from miscellaneous notes and observations, and from the literature on Peruvian mollusks.

Summary of Data on North Coast Peruvian Mollusk Collection

Donax obesulus (in 1979 known as *Donax peruvianus*). This small clam averages between two and four centimeters in its largest dimension. Olsson (1961:343) writes of it,

> The surface color is usually an ivory white or a pale mauve, sometimes a pale yellow and often with unequal rays of violet across the middle. This is the common beach *Donax* of Peru ranging southward into Chile. It is often seen in the markets and it was consumed in great quantities by the Peruvian Indians in pre-Colonial times, judging by the abundance of its shells over their burial places.

The *Donax* clam is well-known in North Coast Peruvian sites, where it becomes the dominant mollusk in shell heaps from the Moche period onwards. On the North Coast today, it is the most important commercially exploited local shellfish, the only one which appears regularly in markets throughout the entire survey region (Virú to Lambayeque). I noted *Donax* in all the markets that I visited (Trujillo, Chiclayo, Ferreñafe), and informants indicated that it is collected along the entire coast and specifically at Puerto Morín (Virú Valley; also spelled Puerto Moorín), Huanchaco (Moche Valley), Huaca Prieta (Chicama Valley), and Morrope and Santa Rosa (Lambayeque Valley). In summer 1978, collectors in Huanchaco received 10 soles per kilo, while the market price in all three visited markets was 20 soles per kilo.[3]

[3] The U.S. Government reported an exchange rate of 189 Peruvian soles per one U.S. dollar for June 30, 1978 (United States Treasury 1978, so 10 soles would have been about $0.05 US at the time of the interview and 20 soles would have been about $0.10. According to carbon collective's online inflation calculator (https://tools.carboncollective.co/ inflation/us/1978/1/

In Huanchaco, the common name for *Donax obesulus* is *marucha*; this name seems to be understood throughout the survey area. In Chicama Valley, an old fisherman living next to the Huaca Prieta mound also referred to *Donax* as *choro blanco* (white mussel), but he used this term in reference to a second shellfish as well. In Puerto Morín, the usual name is *marucha*, but the inhabitants often interchange that term with *conchita*, meaning any little shell. Sánchez Romero (1973:279) lists three common names, *señorita*, *palabrita*, and *concha mariposa*; at no time during my studies did anyone use any of these terms in reference to *Donax*, although *señorita* was used to mean a limpet shell.

According to Informant 1, in Huanchaco, the *maruchas* grow in large banks along the sandy beaches, at a depth of about 0.5 meters at low tide and within the first few centimeters of sand. They never grow on or around rocks; the same quantity occurs at river mouths as along the sandy littoral, but the river mouth banks are always present. The *Donax* can move slowly when the water is active–the more active the water, the faster they move. Thirty years ago, the Huanchaco banks retreated so far that it was impossible to collect the shellfish. Now they have returned in great abundance, although Informant 1 says that before they disappeared, there were even more than now, since increased poverty causes the population to collect more.

According to Carlos Elera, the Guañape banks around Puerto Morín have not yet returned in any abundance, despite the many empty shells strewn along the Guañape beaches. In Puerto Morín, Informant 6 said that there are *maruchas* available now, but that the amount has fluctuated greatly. Three years ago there were more. Pozorski (1976:214) describes an experience in Guañape:

> A sand bar had created a strip of shallow, warm water. Several of us helped a woman and her daughter collecting *Donax peruvianus* [now *D. obesulus*]. Largely sitting in the water and filtering handfuls of sand through our fingers, we soon filled two large plastic bags.

When the ocean current goes from south to north (the Humboldt current), the water is cooler and the *Donax* are somewhat more abundant. When the warm water (El Niño?) comes, the shellfish are less plentiful. Throughout the year, the shellfish do not change visibly in size, shape, or color.

The Huanchaqueros collect *Donax* in relatively calm water. Thus, it is easier to get them in the summer, since the water is less turbulent at that season. Throughout the year, a half moon means bad weather, a full moon means good weather, and a new moon means nothing, since it cannot be seen. Because there is danger involved in working in the fifty centimeter-deep water where the *maruchas* are usually found, custom dictates that fathers and sons do the collecting. On the other hand, Huanchaqueros consider seaweed collection from ten centimeters of water safe, so only mothers and daughters do it.

The Huanchaco collectors are not specialists, but rather are general fishermen who collect *Donax* when conditions do not allow them to do more profitable kinds of fishing. Sometimes outsiders come to the Huanchaco banks to take *maruchas*; the informant did not specify the weather conditions in which these intruders do their collecting.

The device which the Huanchaqueros use in *marucha* collections is called a *cabán*; it consists

accessed 21 January 2024), those would be about $0.24 and $0.49 respectively today.

of a long net attached to a square metal frame (Figure 2, left). One side of the frame has a flat, angled blade with large saw teeth which are worked into the sand below the clams. When a wave is running back from the shore, the collector slowly draws the cabán against the current. The teeth dislodge the clams and the water pressure sends them flying into the net. The water flow carries away any sand that may have stuck to the shells. It is also quite easy, though much less efficient, to gather *Donax* by sticking one's hands into the sand and then withdrawing them, full of shellfish, as the water runs back. This method of collection requires no practice at all.

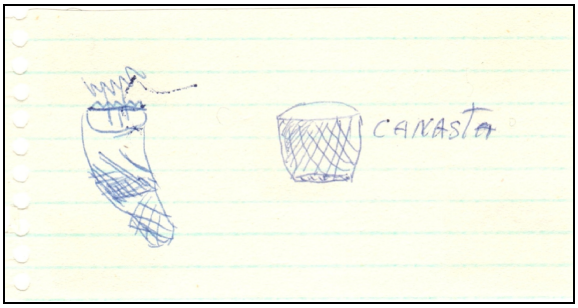

Figure 2: Drawing of a cabán *(left) and* canasta *(right) by Informant 1. This drawing was made on 13 June 1978, and given to me by the informant.*

In Santa Rosa, near Chiclayo in the Lambayeque Valley, many of the families originally came from Huanchaco several generations ago. They use a device for *Donax* collection that is similar to the *cabán* but called a *kafán*. To the north of Santa Rosa, Pozorski (1976:215) describes commercial *Donax* collection by inhabitants of Morrope, who exploit the beaches of San José:

> They use long-handled dip nets with a semicircular opening and a rake-like wide metal strip forming the straight side. *Donax* are captured by raking through the sand and then rinsing sand from the net bag.

To the old fisherman at Huaca Prieta in Chicama Valley, who denied any close association with either Santa Rosa or Huanchaco, the device is again denoted by the term *cabán*. The Huaca Prieta *cabán* has a flat blade lacking the teeth found on the Huanchaco version. In Puerto Morín, they also use a *cabán*.

After collection with the *cabán*, the Huanchaqueros put the shellfish into baskets (Figure 2, right) made out of the river reed (*caña brava*) and called *canastas*. Twenty to thirty kilos are collected per person per expedition (one expedition maximum per day), since more cannot be carried. When the shell banks lie more than one kilometer away, the collectors use burros, which carry thirty to forty kilos apiece in leather bags. The effective range of a burro is about 2.5 kilometers, which takes between three and four hours to traverse. It takes the collectors about three hours on the average to collect twenty to thirty kilos each, and the coldness of the water prohibits them from ever spending more time in collecting the *Donax*.

The Huanchaqueros gather *Donax* both to eat and to sell. For a family of ten people, two or three kilos [total weight of shells and meat] suffice for one meal. Since the shellfish stay edible for only two days, a collection of twenty to thirty kilos leaves a sizable quantity for sale. Although ice is now used for preservation during transport, the Huanchaco collectors themselves do not use it or any other means of keeping the shellfish. In the markets at Chiclayo and Ferreñafe in the Lambayeque Valley, however, some of the *maruchas* are kept in salt and reputedly last for five days to a week.

Maruchas are eaten in soups, stews, *picantes* (hotly spiced dishes), and as cebiches (pickled raw in lime juice). A meal of these clams always includes hot peppers and potatoes, and can also have mussels, crabs, or *muy-muy*, a small crusta-

cean that is the only other animal taken while collecting *Donax*.

The shells of the *Donax* are used in unspecified ways by brujos (male witches or sorcerers), in handicrafts, and for the production of lime to use in chewing coca leaves. The lime (calcium carbonate) releases the alkaloids in the coca, which in turn produce the desired euphoric effect. Lime made from *Donax* shells is apparently highly valued, since it is cooler–easier on the mouth and throat–than natural limestone. Informant 1 says that the burning of *maruchas* for lime is mostly done by people who come down from the highlands, where the coca habit has much greater popularity at the present than on the coast.

Rock-dwelling univalves. This section covers the collection and use of a variety of different species treated by traditional collectors as one unit. Each of these animals grows in the rocky littoral, in the intertidal zone of the broken rocks of certain headlands. The data on this exploitation group refer specifically only to the Cerro Negro peninsula in Virú Valley, since both of the informants came from that area, where I was also able to observe and verify much of the information. Nevertheless, most of the data probably also applies to similar areas throughout the North Coast.

The most important rock-dwelling gastropods are two species of keyhole limpets (*Fissurella* spp.), another limpet (*Collisella* sp., probably *orbignyi*), and a kind of chiton. The Virú collectors also take a number of non-molluscan rock-dwellers, including a clingfish, *Sicyases sanguineus*, of the family Gobiesocidae. These fish have suckers on their bellies for attaching themselves to the rocks. For a complete listing of species collected from Cerro Negro, refer to Interviews 2 and 4.

The Viruñeros have a number of terms for the keyhole limpets, including *sambo*, *sambito*, *viuda*, and *lapa*. Sánchez Romero (*ibid*: 264–267) lists three species of *Fissurella* common to Peru, but gives only *lapa* as the common term for all three. The *Collisella* species is called *la senorita*, and the clingfish is known as *peje sapo* (toad fish). Sánchez Romero (*ibid*.:110) gives *chinguillo* as an alternate name for the *peje sapo*.

None of the Cerro Negro species seem to occur in the Huanchaco area, due to the lack of suitable rocky environments. According to Sánchez Romero (*ibid*.:264–267), two of the three *Fissurella* occur throughout the North Coast, while the third grows only as far north as Pacasmayo, about 100 kilometers north along the coast from Huanchaco. The *Collisella* limpet and the *peje sapo*, however, are found only as far north as Salaverry, just to the south of Huanchaco.

The first Virú informant (Informant 2) lives in Huanchaco, although he lived in Guañape (the area between Puerto Morín and Cerro Negro) until 1968. Before 1976, Informant 2 was a fisherman and a *mariscador* (shellfish collector); since then, he has become a farmer. The other Virú informant (Informant 4) has lived in Puerto Morín since he was ten years old. Although he comes from a family of farmers, Informant 4 himself has always been a fisherman. He continues to collect shellfish on a regular basis using traditional techniques.

In general, the two informants agree closely. Where they conflict, I have used Informant 4's information, since he is currently involved in collecting and since much of his data was verified through observation.

The mollusks are collected from the rocks at or near the water level, never from underwater. They can move slowly, and possibly move slowly to stay level with the tideline. Informant 4 says

that they move to a more secure spot when the waves crash forcefully against them, and he also thinks that they move to less accessible places when they see the collectors coming.

All of the species in the exploitation group are collected year-round. Neither informant remembers any time when none of the creatures was available, but the number present in any particular location can vary from few to many in a matter of days, with no recognizable pattern. In general, these species have nothing approaching the abundance of the *Donax*. Pozorski (1976:213) noted that "rock-perching shellfish are still occasionally collected when they can be found, but continuous collecting has made most species quite rare." The number of suitable environments also limits the population sizes at any one time.

Collectors take more specimens in the summer, but the informants attribute this to the calmer water during that season. Both men agree that the rock-dwellers require cool water and believe that they never occur north of Lambayeque Valley. Informant 4 recalls finding dead univalves on the beach upon occasion, and he thinks warmer water from the north killed them.

Only fishermen with sufficient experience to be labeled *mariscadores* collect from the rocks, since it is considered very dangerous. Women never go out to the rocks. Collecting takes place only when the water is very calm; even then, large waves come every few minutes, causing the *mariscadores* to run up to higher ground. Those who lack experience are reputedly caught by the waves and dashed against the rocks.

The collectors use a tool also called a *mariscador* to pry the shellfish and *peje sapos* off the rocks, although Sánchez Romero (1973:227) mentions the use of a lance-like implement to capture the clingfish. *Mariscadores* are made of iron and are forty to fifty centimeters long with a wrist-strap at one end and a flat prying edge at the other. The collected animals go into a net bag which the fishermen keep at their waists. An average catch is small, usually only a few kilos, although the exact amount depends on how many the collectors want and how many are available. Informant 4 makes one expedition per day, two or three days per week. It takes about three quarters of an hour to walk from Puerto Morín to the tip of Cerro Negro, and collection takes from a half hour to several hours, depending on the number of specimens available. The Viruñeros usually try to take as many as possible, but they leave the little ones to grow. Each animal is pried off separately, so it is simple to select only the mature ones.

In winter, the shellfish live for up to two days after collection. In summer, they die sooner. After two and a half days, a bad odor signals that they have become inedible. Occasionally the meat is dried, but no other preservation techniques are used in Puerto Morín.

The Cerro Negro collectors take the rock-perching species both for sale and for home consumption. Due to the small numbers available, the commercial aspect is minimized; aside from a little dried meat occasionally sent to Trujillo, the *mariscadores* sell all their excess take themselves in Virú village, about eight kilometers away. *Canastas* are used to hold the shellfish in the market. In summer 1978, the collectors got thirty soles[4] per kilo, with no differentiation made among the various shellfish when weighing or selling.

[4] Thirty soles would have been about $0.16 US at the time of the interview. According to carbon collective's online inflation calculator (https://tools.carboncollective.co/inflation/us/1978/1/ accessed 21 January 2024), that would be about $0.74 today.

Since the shellfish are all univalves, they do not require opening. Instead, the women boil the whole mollusk and then use a knife to cut off the part that protrudes below the edge of the shell. The part inside of the shell consists of the intestines and other organs and is considered inedible.

In Puerto Morín, they use the rock-dwelling mollusks only in *picantes* and *cebiches*. Sometimes, however, the *sambito* (a keyhole limpet) is used in a soup. The shellfish dishes are eaten with yuca, potatoes, seaweed, rice, and other staples.

Aside from their use as food, the rock-perching univalves can be used to produce lime. Informant 2 described the following method: To get lime from the shells, they make a circle of *carca* (cow pats), put the shells in the middle, and burn the manure. When the shells turn brown, they take them out of the hot circle and put them into large metal cans. They add a little water and put the can over the fire. The heat turns the shells into the powder used in coca chewing. This lime, or *cal*, is supposedly even better than that made of *Donax* shells. Neither informant mentioned any other use of the shells.

Marine snails. The material in this section is the least reliable of my data, since my source, Informant 3, is a 15-year old student who only collects on an occasional basis. Several species are grouped together here, as in the previous section; all are collected together and treated as a single unit by the informant. The informant had no specimens of the snails in question, but they probably include *Thaisella chocolata* (in 1979 known as *Thais chololata*), a common marine gastropod found from Ecuador south through Peru (Keen 1958:372; Sánchez Romero 1973:270). *Thaisella* shells are present in almost every site excavated by Pozorski (1976) in the Moche Valley.

According to Informant 3, all snails are called *caracoles*. They grow all along the coast in certain unspecified zones. In Huanchaco, where the interview took place, the *caracoles* grow on small rocks (less than one meter in diameter and too small to support any of the rock-dwelling species discussed in the previous section). The snails are also found on the piers of the dock. These creatures move slowly with the tides and are always taken at the waterline. The collectors take *mococho* (seaweed) and a variety of fish along with the snails.

Women and children do the collecting along the beach, but only the fishermen can go into a deeper zone called the *poza*, where they find larger snails. Collecting occurs all year-round, but only in calm water. Thus, more collecting takes place in summer than in winter.

Caracoles are collected by hand with no special tool and are put into net bags called *caitos*. When the women are also gathering *mococho*, then they use *canastas*. The quantity taken and the time involved in collection depend upon the number of snails in the exploitation area. Little mollusks are left to grow.

The snails stay alive for about a day after collection, but the informant did not know how long they remain edible. In the market at Chiclayo, *Thaisella chocolata* from Pacasmayo sold for thirty soles per kilo in summer 1978 and were said to last three days without ice. Larger *Thaisella* from Chimbote sold for forty soles per kilo.[5] In Huanchaco, *caracoles* are sold by the dozen.

[5] Thirty soles would have been about $0.16 US and 40 soles would have been about $0.21 at the time of the interview. According to carbon collective's online inflation calculator (https://tools.carboncollective.co/inflation/us/1978/1/ accessed 21 January 2024), that would be about $0.74 and $0.98 respectively today.

In Huanchaco, the snails are taken for home use and for sale. When the trip to the market is less than a day, they keep well in bags or *canastas*; if the trip lasts more than a day, then ice is used. For cooking, the meat is removed by boiling in water. A black section on the upper part is cut off and discarded and the rest is eaten. Huanchaqueros often use snails in *cebiches mixtos* (a cebiche with a variety of seafoods) and in *picantes* containing other shellfish and sometimes *mococho*. Snail shells are sometimes used as decorations in handicrafts.

Semimytilus algosus. This species is a small, blue mussel, averaging forty to fifty millimeters in length and found along "the South American coast washed by the Humboldt current. It is extremely abundant to the south of Lima, at Paracas, and in the Bahía de Independencia" (Olsson 1961:115). Informant 5, a resident of Puerto Etén in the Lambayeque Valley, says that it is particularly common at three sites along the coast, Callao (near Lima), Chimbote, and Máncora. Elsewhere, it occurs only in small quantities, as at Puerto Etén in the Lambayeque Valley, where the interview took place.

Informant 5 comes from a long line of fishermen. Three generations previously, his family moved to Etén from Huanchaco. He has always fished.

According to the informant, the mussels are *choritos* or simply *choros*. They grow on rocks and wharf piers and cannot move. No other shellfish occur with the *choritos*, but some fish species are found with them (see Interview 5 for a list of these species). *Choritos* do not grow near river mouths, presumably because silt would cover the rocks on which they need to live. In Puerto Etén, there are always the same number of mussels, since they are limited to certain rocks and to the piers. These locations are always covered with the shellfish.

Fishermen in Puerto Etén collect *Semimytilus algosus* year-round, but do so more frequently in the summer when the tides are lower and the water is calmer. Sometimes the shellfish disappear for a while, but without a recognizable seasonal or other pattern.

In Puerto Etén, men do the collecting with a special instrument called a *rasqueta* (scratcher). This tool is made of iron and is about fifty centimeters long, like a *mariscador* from Virú. With a *rasqueta*, the fishermen scrape off rows of shellfish from the rocks or piers. If possible, they only take the larger specimens, from twenty to forty millimeters in length. The little ones are avoided as "not worth the trouble". When collecting from the wharf, a *canastilla* (little basket) is lowered on a line to the fisherman at the bottom of the pier, who scrapes the *choritos* and puts them in the basket. Whenever it is full, the fisherman on the wharf hauls up the *canastilla* and empties it into a sack of about 0.85 meters in diameter and 1.5 meters in depth. The collectors work until they get about a half sack, which takes them around a half hour. It takes about ten minutes to get from the wharf to their homes carrying the sack.

Choritos are only collected for home use in Puerto Etén. The women wash the shellfish and put them into boiling water to open them. The meat can be used in any dish: soup, *picante*, cebiche, etc. Six to seven people can eat four to five kilos of *choritos* in a meal. The informant knows of no use other than food for *Semimytilus algosus*.

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SHELLFISH COLLECTION QUESTIONNAIRE, SPANISH VERSION

I. Información sobre el informante

A. 1. Nombre del informante
2. Edad
3. Ocupación
4. Lugar
5. ¿Cuántos años vive en este lugar? ¿En cuales otros lugares ha vivido?
6. Sexo del informante
7. ¿Cuál es su lugar de nacimiento?

B. Si no es un colector actual
1. ¿Fue siempre un pescador?
2. ¿Fue de una familia de pescadores?
3. Si la respondió "sí" a B.1. o B.2., ¿Adonde? ¿Cuando? ¿Cuantas veces?

C. 1. ¿Pescador tradicional o no?

II. Información general sobre las especies de conchas

A. 1. Nombre científico
2. ¿Cómo se llama esta concha? (Nombre vulgar)

III. Distribución espacial

A. 1. ¿Pescan esta concha en toda la costa o no?

B. 1. ¿Puede moverse esta concha?
a) Si puede–¿rápido o despacio? ¿Cuándo se mueven las conchas?
2. ¿De donde sacan las conchas?
a) ¿En la arena?
b) ¿En las rocas?

c) ¿En el agua?
d) ¿A qué profundidad en el agua–y/o en la arena?
e) ¿Cuándo la marea está alta o baja?

3. ¿Encuentran las conchas con algunas otras cosas? (¿Algas, otras conchas, peces?)
4. ¿Encuentran las conchas en o acerca de las bocanas?

IV. Disponibilidad temporal

A. Fenómenos físicos afectando la disponibilidad
1. ¿La corriente del Niño tiene una influencia en una mayor o menor recolección de las conchas?
2. ¿Las estaciones tienen influencia?
3. ¿Las mareas tienen influencias? ¿La luna? ¿Las estrellas?
4. ¿Recolectan en aguas tranquilas o en mar agitado?

B. Fenómenos sociales afectando la disponibilidad

1. ¿Quiénes se dedican a recolectar las conchas? (¿Mujeres? ¿Niño? ¿Pescadores?)
2. ¿En qué meses recolectan más conchas? ¿Por qué?

C. Información general sobre la disponibilidad
1. ¿Recolectan las conchas todo el año? Si no, ¿por qué?

D. Cambios tras los años
1. ¿Años atrás, hubo más abundancia de las conchas?

E. Cambios visuales
1. ¿Las conchas cambian durante el año?
2. ¿Las conchas cambian de un año a otro?

V. Preservabilidad

A. Natural
1. ¿Cuánto tiempo sobreviven las conchas después de recolectarlas?
2. ¿Hasta cuándo una concha es comestible?

B. Métodos de preservación
1. ¿Cómo se conservan las conchas?
a) ¿En agua?
b) ¿En seco?
c) ¿Con sal?
d) ¿En hielo?
2. ¿Qué métodos se usan para preservar al marisco cuando se comercializa a gran distancia?

VI. Regeneración

A. 1. ¿Siempre hay los mismo bancos de conchas?
2. ¿Sacan todas las que pueden? ¿Las pequeñas también?

VII. Recolección

A. Los recolectores
1. ¿Quiénes recolectan las conchas? ¿Por qué estas personas? ¿Es necesario ser especializados para recolectar las conchas?

B. Cómo
1. ¿Cómo recolectan las conchas? (¿de las rocas, de la arena, del agua?)
2. ¿Se necesitan herramientas especiales?
3. ¿Qué clase de depósitos utilizan para las conchas?

C. Cantidad
1. ¿Qué cantidad recolectan cada vez? ¿Cuántas veces por día? ¿por semana?
2. ¿Cuántas conchas por cada kilo?
3. ¿Cuánto tiempo tardan en recolectar un kilo?
4. ¿Cuánto tiempo necesitan para transportarlas a su casa?

VIII. Utilización

A. ¿Quiénes comen las conchas?
1. ¿Recolectan las conchas para auto-consumo o para la venta?
2. ¿Si es para auto-consumo:
a) ¿Cómo abren las conchas para consumirlas?

b) ¿Cómo limpian las conchas?
c) ¿Cómo cocinan y preparan las conchas?
d) ¿Qué cantidad de conchas se necesitan para una persona para cada comida o cada día?
e) ¿Con cuales otros alimentos se consumen o comen las conchas?

3. En un mercado
a) ¿Cómo se transportan las conchas hasta el mercado?
b) ¿Cuánto pagan a los recolectores por kilo?
c) ¿Cuánto pagan a los transportistas por kilo?
d) ¿Cuánto pagan a los vendedores por kilo?
e) En el mercado, ¿Quienes compran las conchas?
f) ¿A qué precio venden las conchas?
g) ¿Conoce el modo de preparar las conchas?

B. Otras utilizaciones
1. ¿Se utilizan las conchas como medicina?
2. ¿Se utilizan las conchas como adornos?
3. ¿Hay creencia acerca de las conchas?

INTERVIEW DATA

Numbers and letters refer to sections in the questionnaire. If the informant did not respond to the section's question(s), the letter/number of that section is not listed in the responses.

Informant 1
Huanchaco, 13 June 1978

(Huanchaco is a coastal fishing village *c*. ten kilometers northwest from Trujillo.)

I. A. 1. -----
2. 40 years.
3. Fisherman.
4. Huanchaco.
5. Always lived here.
6. Male.
7. Huanchaco.

C. 1. Traditional

II. A. 1. *Donax obesulus*
2. *Marucha*, *Marucha blanca*

III. A. 1. All the coast–south and north to Puerto Pizarro.

B. 1. Move, but slowly–depending on how active the water is–more active water, more movement. When the wave breaks on the sand, the *maruchas* move–always in large banks (in sand). Move only when water is active; when water is tranquil (calm), they do not move.
2. Taken only in sand (*banco de arena)*, at depth of half a meter or less in water when low tide–on the surface of the sand or a few centimeters in the sand.
3. Taken with *muy-muy* (*Emerita analoga*) usually (a creature somewhat like a short, fat shrimp with too many feet)–but never found with anything else.
4. Same quantity at river mouths as elsewhere–but always found there.

IV. A. 1. When the current is from south to north (cold Humboldt Current), more shellfish, and when from north to south (warmer El Ñino Current), fewer *maruchas*.
2. In summer, it is easier to get the *maruchas*; sea is calmer.
3. When there is a half moon (either half): *mal tiempo*, (bad time, bad weather). When there is a full moon: *buen tiempo* (good weather). When there is no moon (new moon or clouds): cannot tell if it is good or bad time.

All this refers to tides: *buen tiempo* (tranquil water); *mal tiempo* (rough water). Within the boundaries of the moon-dictated changes, water is bad when there are rapid changes in weather; water is good when the weather is stable.

4. Always collect *maruchas* in calm water– never in turbulent water.

B. 1. Custom dictates for *maruchas*– fathers and sons collect them together, and their wives do the selling (for seaweed collection –mothers and daughters only). Fathers and sons collect the *maruchas* because they are fifty centimeters deep–more dangerous than collecting seaweed at water's edge, in only ten centimeters of water. (In Huanchaco, seaweed is called *mococho*–this is true for the North in general; in the South, around Lima, it is called *cochayuyo*, the Quechua word for water plant–Carlos Elera).

D. 1. Years ago–there were more–because the economic situation (more poverty) caused higher exploitation; but thiry years ago, the *marucha* beds retreated so far that it was impossible to collect them. Now, they have returned–very abundant (according to Carlos this is only so in selected areas–not so in Guañape).

E. 1.–2. Does not change in any regular way–all sizes collected at all times.

V. A. 1. Stay alive one day–no more.

2. On the third day, they can no longer be eaten–only two days of edibleness.

B. 1. Preserved in ice–no preservation before ice.

2. In transportation, not kept in ice–collected one day, sold the next.

VI. A. 1. Always found in the same places along the coast.

2. Collect all they can because they are very abundant–but the collection technique only gets the big ones–the little ones are left so the *banco* (bed) will not disappear.

B. 1. No specialists–but men from other places come to collect *maruchas* to sell. People from Huanchaco don't collect *maruchas* when the water is (very) calm and they can do other, more rewarding kinds of fishing. (Unclear whether or not outsiders collect on calm days).

C. 1.–2. Taken always from sand, with a *caban*.

3. *Canastas* made of *caña brava* (a river reed) used to store and transport collected shellfish (Figure 2, right).

D. 1. Twenty to thirty kilos per day–more cannot be carried. When about one kilometer away or more, they use burros, which can carry thirty to forty kilos apiece. The burros have leather carrying bags.

2. Do not know.

3. Depends on condition of the sea. About three hours to take a day's catch–twenty to thirty kilos–no more time spent because of coldness of water.

4. With a burro, to go about 2.5 kilometers (to beds and back), about three to four hours.

VII. A. 1. For selling and eating both–twenty to thirty kilos is too much for one family to eat alone.

2. a) For soup–the steam opens the shells.

b) The meat does not need to be cleaned.

c) Soup, cebiche (pickled in lime juice without cooking), cooked in hot sauce–a kind of stew.

d) For ten persons (a family)–two to three kilos for one meal–in soup, stew.
e) With mussels in soup, with *muy-muy*, with crabs, always with peppers, potatoes.

3. a) In *canastas*.
b) When further from collection to sale–more expensive. (Unclear whether this refers to the price paid to the collectors, to the transporters, or the vendors in the market). One kilo of *Donax* sold for ten soles in Trujillo.

B. 1. People, mostly from the sierra, burn the shells to make a powder to use with coca leaves. The powder contains *cal* (lime–which activates the alkaloids in the coca leaves). The users chew the leaves in one side of their mouths and add the lime periodically from a pouch). The lime from the *marucha* shells is better than natural lime (from limestone), because it is less hot (more *fresco*), easier on the mouth and throat. The *marucha* is not used for any medicinal purpose beyond coca chewing.
2. *Maruchas* are used for decorations in *artesanías* (craftwork).
3. Brujos (male witches) use them. (The informant would not say how.)

Informant 2
Huanchaco, 14 June 1978

I. A. 1. -----
2. 45, approximately.
3. Now a farmer–but used to fish, collect shellfish–up to two years ago–eighteen years as a fisherman and (mostly) *mariscador* (shellfish collector).
4.–5. Huanchaco–has lived here for ten years, but before that was in Guañape.
6. Male.
7. Born in Guañape.

C. 1.Traditional (but his sons are not).

II. A. 1.–2. (The following list and information are species from Guañape which are not found in Huanchaco–Huanchaco has no rocky headlands, just sandy beaches and a few scattered rocks, mostly under one meter maximum dimension).

The following are all edible rock-dwelling univalves. Where the shell matches one in the type collection loaned me by Shelia Pozorski, the scientific name is given in parentheses.

Pata de Burro (*Concholepas concholepas*)
Senorita (*Collisella* sp.)
Sambo (*Fissurella* sp.)
Barquillo (*Fissurella* sp.), smaller than the *sambo*. There is some confusion here–although two distinct Fissurellae are recognized by collectors, the smaller one may be called *recacha*, since a chiton also collected with this group of univalves was also described as a *barquillo*. (Another informant who identified shellfish identified one *Fissurella* as the *sambo* and a second as *viuda*–the widow.)
Recacha

Other edible rock-dwelling creatures mentioned as being collected with the univalves:
Ancoco (sea-cucumber)
Callachipe (? I never saw one of these, nor had it described, nor heard of it outside of this interview.)
Estrella de mar (starfish)
Peje-sapo (*Sicyases sanguineus*–a fish that lives on the rocks–it attaches itself to them by means of a sucker on its underside.)

All the following information treats all the above species as one group.

III. A. 1. Found wherever there are rocks on the Peruvian coast from Lambayeque southwards.
B. 1. They move slowly among the rocks, like snails.
2. Taken from rocks only (all are rock-dwellers). The tide is low for six hours, then high for six hours–taken only when the tide is low; it is dangerous even then.
3. All these types are found together.
4. Do not find them near river mouths–because there are no rocks.

IV. A. 1. For these species, which like cold water or cool water, the El Niño current has a bad effect–these types are not found north of Lambayeque.
2. More available in summer than winter–but there are always some.
3. The moon influences the collections, because it dictates the tides (but the informant said nothing specific).
4. Only collected when the water is calm–still, this is dangerous–every three minutes or so, a big wave comes and the collectors must run back to the shore (or higher rocks)–so the collection process is a scuttling back and forth between powerful waves.

B. 1. Only the men collect–too dangerous for anyone else (difference between a *pescador* [fisherman] and a *mariscador* [shellfish collector]–this is a job for *mariscadores*; the informant was a *mariscador*).
2. Collecting all year round.
C. 1. Generally, the climate is better in the summer, but collect all year.
D. 1. There have always been the same amount–always a small amount. Enough for self-consumption, not for sale.

V. A. 1. The shellfish die right after collection.
2. Edible only for one day–"twenty-four hours"–after collection.
B. 1. Do not preserve them–because they are for self-consumption only–collected on a daily basis.

VI. A. 1. Always in the same place–because they do not collect the little ones–easy to avoid them, since the collection is done one-by-one.
2. Take all the big ones they can get–but not the little ones.

VII. A. 1. Only *mariscadores* collect the shellfish.

B. 1-2 The tool (necessary) is also called a *mariscador* and is an iron bar, 40 to 50 centimeters in length, with a strap for the wrist at one end and a flat prying edge or else a point at the other end.
3. They use a net bag, kept at the belt.

C. 1. The amount varies according to conditions, but it is usually small, only a few kilos.

VIII. A. 1. For self-consumption only.
2. Since univalves–do not need to open them. Only eat the part which protrudes from the shell–the rest, in the shell, is not eaten–it is the guts, etc. These types are eaten in cebiche or *picante* (hotly spiced dishes)–never in soups or in anything else. Usually all the mentioned types are taken and eaten together.

B. 1. Used for *cal*–lime–for coca chewing; no medicinal use. To get the lime, they make a circle of *carca* (cow pats) and put the shells in the middle, burn the manure. The shells become brown; then they take them out of the hot circle and put them in large metal cans. They add a

little water–drops–and put the can over the fire. The heat turns the shells into powder–this is the end-product. This lime is even better than that from *maruchas* (*Donax*)–has more calcium.

Informant 3
Huanchaco, 17 June 1978

I. A. 1. -----
2. 15 years old.
3. Student.
4. Huanchaco.
5. Always lived here.
6. Male.
7. Born in Huanchaco.

B. 2. Yes, from a family of fishermen.

C. 1. Traditional in methods.

II. A. 1. *Thaisella chocolata* and other *Thaisella* spp. (according to Carlos; no specimens were available, but the shellfish under discussion were clearly marine snails and so most likely *Thaisella*. Again, the informant treats all kinds of snails in the collecting repertoire as one homogenous group).
2. *Caracoles*–no common names that distinguish between the species.

III. A. 1. Found in certain zones along the entire coast.

B. 1. Yes, they move slowly; they move with the tide, to stay in the water.
2. Taken from rocks; the snails are always found more or less at waterline.
3. Taken with the *mococho* (seaweed) and with certain fish: *tramboyo*, *chalaco*, *cachiche*, and *cascajo* or *peje diablo* (this last is very rare. In the summer only, they are sometimes found with octopi).
4. Not found near river mouths (Actually, informant did not seem to know). Note–the rocks referred to by the informant are found scattered on the beach at Huanchaco; none are larger than one meter, so they do not furnish a home for the univalves and other rock-dwellers discussed by Informant 2.

IV. A. 2. In summer, when the water is warmer, more snails.
3. Informant knows that the moon has influence–but only a vague idea–(no experience or real knowledge).
4. Only collected in calm water.

B. 1. Women and children only do the collecting along the beach, but in Huanchaco there is a zone called *poza* (very deep water, with larger snails). Here only men go.
2. More collecting is done in summer than in winter.

C. 1. All year round.

D. 1. Old people have told the informant that there were many more snails years ago.

E. 1. No idea if the shellfish ever change.

V. A. 1. They live twenty-four hours.
2. The snails are taken for self-consumption, so the informant does not know how long they stay edible.

B. 1. Sometimes the snail meat is dried.
2. When the trip to market is less than one day, they last fine in bags, without preservation; if more than one day, then ice is used.

VI. A. 2. Take only the big ones; leave the little ones to grow.

VII. A. 1. Women and children usually collect the snails, because it is safe.
B. 1. The snails are collected by hand.
2. No special tools.

3. *Caitos* (net bags) used in collecting, Also *canastas* used, but only when they are also taking *mococho*.

C. 1. Quantity depends on how many are in the area being exploited.
2. No idea how many shellfish per kilo–in Huanchaco, they are sold by the dozen, not by weight.
3. Time to collect a dozen–depends on when collecting. In one *entrada* (one trip in and out of the water) you can get a dozen in a good area; in a half hour, you can get "a good number."

VIII. A. 1. Snails are collected to eat and to sell.
2. Get the meat out by boiling in water. In the upper part is a black section which is cut off and not eaten; the rest is eaten. Cook in cebiches, *picantes*, and soups. The informant does not know how many per person per meal. Snails are often used in *cebiches mixtos* (a cebiche with many shellfish, octopus, etc.), in *picantes* with *mariscos*, and, sometimes, with *mococho*.
3. Taken to the market in *canastas*. For more or less one kilo, collectors are paid about 90 soles (this answer was vaguely given).

B. 2. Sometimes the snail shells are used as decorations.

Informant 4
Puerto Morín (Virú), 22 June 1978

I. A. 1. -----
2. 22 years old.
3. Pescador and mariscador.
4. Puerto Morín.
5. Lived here 12 years; before that, in Virú village (an inland village about 15 kilometers ESE of Puerto Morín).
6. Male.
7. Born in Virú–a *Viruñero*.

B. 1. Yes, the informant has always been a fisherman.
2. No–his family are farmers.

C. 1. Uses traditional methods.

II. A. 2. *Sambo*, *Sambito*, *Senorita, Barquilla-Recacha* (Again, all these are treated as one homogenous group; also, still confusion over the identity of the *Barquilla* and the *Recacha*–here, the Barquilla is definitely a chiton; see Informant 2).

III. A. 1. No idea if they are found elsewhere or not.

B. 1. They move–but slowly–when the waves crash very strongly against the rocks, they move to a more secure place. Or, when the collector goes to collect them, "Los mariscos miran y tratan de esconderse a sitios más difíciles para sacarlos" (when the creatures see the collector coming, they try to hide themselves in places harder to take them from).
2. Found on the rocks–"in the air" as opposed to underwater; they are always at water level, high or low tide.
3. Found with *mococho*.
4. These shellfish and other rock-dwellers are not found in river mouths–but *maruchas* (*Donax*) are.

IV. A. 1. The informant does not know of El Niño (the warm south-bound current)–but sometimes the *mariscos* get detached from the rocks and are found dead on the sandy beaches–the informant thinks this is due to hotter water.
2. Yes, the seasons affect the size of collection–more in summer, because water is calmer.
4. Only collected in calm waters– not when turbulent.

B. 1. Only men collect the shellfish.

2. In January, February, and March (summer)–collect more–because the sea is calmer.

C. 1. Yes, collect year round.

D. 1. Yes, there were more in the past.

E. 1. "One week, one goes to a certain site to collect the *mariscos* and there are many creatures; but when one goes another time, there are not any, or few; they change places."

V. A. 1. In winter, they last two days; in summer, they last one to one and a half days alive.
2. They are edible for two days–in two and a half days, a bad odor tells you not to eat them.

B. 1. Sometimes they are dried.
2. Also dried for sending to market–but only sent to Virú village and a few to Trujillo (about 40 to 45 kilometers north along the coast).

VI. A. 2. They take all they can–but leave the little ones to grow.

VII. A. 1. The men collect the *mariscos*–those who know how to collect them–those who have not been taught (the uninitiated) are caught by the waves.

B. 2. A *mariscador* is needed (see Informant 2).
3. A net bag is used while collecting.

C. 1. How many are taken depends on how many they want, how many are available. They go one time per day, two to three days per week.
2. Four dozen per kilo–more or less. (Depends on what kinds are taken.)
3. Time of collection depends– when many *mariscos*–a half hour–fast–when few *mariscos*–it takes longer.
4. It takes about three quarters of an hour to get to Cerro Negro (the rocky headland where the collecting is done) from Puerto Morín.

VIII. Utilization
A. 1. Collected for sale and for eating.
2. Boil first; cut out the good part with a knife after boiling. Used in cebiches, *picantes*, and (*sambitos* only) in soups. Eaten with yuca, *mococho*, rice, potatoes, etc.
3. Taken in *canastas* to the market, 30 soles per kilo are paid to the collectors–who also do the selling.

B. Used for *cal* or food; nothing else.

Informant 5
Puerto Etén (Lambayeque), 7 August 1978

I. A. 1. -----
2. 55 years old.
3. *Trabajador marítimo* (maritime worker).
4. Puerto Etén (in Lambayeque Valley, several hundred kilometers north of Trujillo).
5. Lived here all his life.
6. Male.
7. Born in Puerto Etén–but his great-grandparents came from Huanchaco.

B. 1. Has always fished.
2. His family have been fishermen for generations.

C. 1. Traditional.

II. A. 1. *Semimytilus algosus* (probably–it is a small black mussel).
2. *Chorrito*–or simply *choro* (mussel).

III. A. 1. Three sites on the coast have abundant quantities of this shellfish: Callao, Chimbote, Mancora–other

sites have them only in small quantities.

B. 1. No, cannot move.
2. Found on rocks.
3. Not found with other shellfish–but with some fish species: *chita*, *pico de loro*, *chalacos*, and *tramboyo*.
4. Not found near river mouths.

IV. A. 1. Always the same number– because there are a limited number of rocks where the shellfish can live–and these are always covered with mussels.
4. In winter, the tides do not get very low. They are always high. In summer, January through April, the tides are low. Thus, they collect more in summer, when the water is calmer due to lower tides.

B. 1. The men collect them.
2. Collect most in summer.

C. 1. Year-round collection, when there are shellfish, but sometimes, without seasonal or other pattern, the shellfish leave for a while.

D. 1. Cannot say if there used to be more.

E. 1. No, they do not change.

V. A. 1. They live twenty-four hours.
2. They are edible for two days without ice, if they are in a large group (for instance, in a large bag). If they are separate, they do not last as long.

B. 1-2 Preserved in ice, for sending them a long distance–they last fifteen days in ice.

VI. A. 1. Yes, they are always in the same places.
2. They take all they can of the full-grown ones, two to three or four centimeters in length. The shellfish never grow larger than four centimeters. The little ones are left because "they are not worth it" to collect.

VII. A. 1. Men–*buzos* (divers)–do the collecting.

B. 1.–2. Use a special instrument–*rasqueta*–of iron, 0.5 meters, to pry off the shellfish from the rocks (or wharf piers). A whole row is scraped off at a time.

3. *Canastilla* (a little basket) is lowered from the wharf on a line to the collector at the wharf piers.

C. 1. Each time, they take about a "half-sack"–a sack is *c*. 0.85 meter in diameter and 1.5 meter in depth. Takes thirty minutes to get half a sack.
4. Ten minutes to get the shellfish home.

VIII. A. 1. Only for home use.
2. Shell is washed–meat does not need washing; cook or open in boiling water; use in whatever dish you wish–cebiche, soup, etc. six to seven people eat four to five kilos in a meal. These shellfish are eaten with any other foods.

B. Informant knows no other use beyond food.

Misc. The informant says that *Donax* are collected by women from the vicinity of the mouth of the río Reque. They are always collected.

Informant 6
Puerto Morín (Virú), 30 7 1978

Informal interview with -----

Donax collected with a *cabán*, as in Huanchaco, or with hands. Now there are clams, but, in the past, sometimes there were a lot, sometimes few, and sometimes none. Three years ago, they disappeared.

The *mariscos* from the rocks are always there.

There are more *Donax* in the summer, due to the heat. They are called *maruchas* here, as in Huanchaco. The general term *conchita* is also used. *Donax* are collected at low tide, which lasts six hours for the collectors.