

3. How Did the Karankawas Adapt to their Environment?

Researcher _____

Research Team _____

To a newcomer, the central coast of Texas can be a confusing maze of islands, lagoons and salt marshes. The topography is low and flat with thick marsh and river floodplain vegetation. The Karankawas had a thorough understanding of this land and the rich resources that it could provide. They adapted to this environment by integrating the use of these resources into their lives. You and your team will investigate how the Karankawas interacted with and adapted to the coastal environment.

Materials: none

Procedure:

1. To understand how the Karankawa used the available food resources found in their environment, you must analyze the food resources that were available to them. Why would all the questions below be important to understanding the Indians and their use of resources?
 - a. Where is the resource found?
 - b. What amount of the resource was available?
 - c. When was the resource available?
 - d. Is the availability of the resource predictable or not?
 - e. Is the resource concentrated in one area?

2. The fish and shellfish resources of the estuarine bays and lagoons were a major resource for the Indians. The Texas coast has always produced a large supply of shellfish. Oysters, scallops, and quahogs are found in the bays and lagoons. Gastropods are found near the tidal passes between the barrier islands. Clams live in the river influenced areas of the bays and where tides enter the streams. The important fish species of the coastal bays are black drum, redfish, speckled sea trout, Atlantic croaker, sea catfish, southern flounder, sheepshead, silver perch and mullet. While fish can be taken in the bays year-round, there are peak periods for catching the largest amount with the least effort and risk of failure. Examine the data from commercial catches for two major fish species, black drum and redfish, on the central coast of Texas in Figures 3.1, 3.2, and 3.3. Note that different measures are

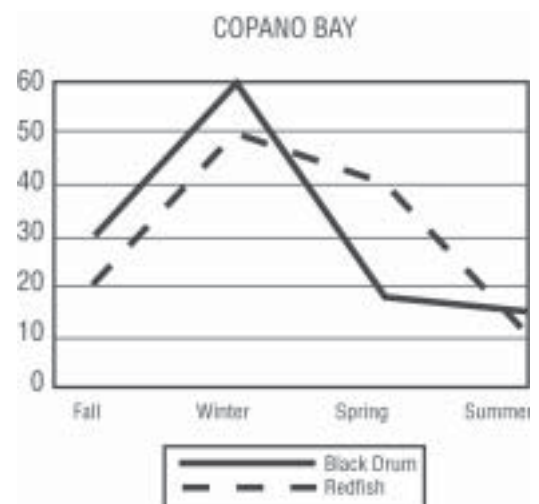


Fig. 3.1. Percent of fish harvested from Copano Bay. (Source: Ricklis: The Karankawa Indians of Texas)

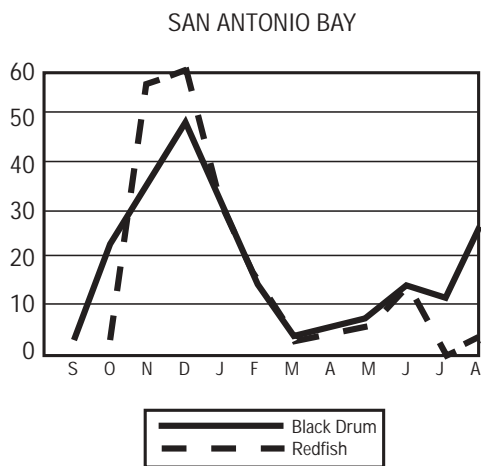


Fig. 3.2. Average number of fish harvested from San Antonio Bay. (Source: Ricklis: The Karankawa Indians)

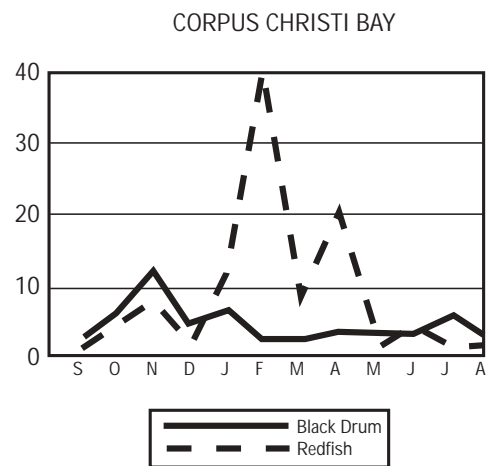


Fig. 3.3. Pounds of fish harvested from Aransas and Corpus Christi Bays. (Source: Ricklis: The Karankawa Indians)

used to indicate the amount of fish harvested. Also note during what time of the year the greatest peaks (amounts) occur. When would the most fish be caught with least effort?

- When were black drum and redfish the greatest percent of the catch?
- When were the most black drum and redfish caught in San Antonio Bay? What was the average of fish in each haul during the peak time?
- During what time period was the largest amount of redfish caught?

6. The major land resources were white-tailed deer and bison. They were found year round on the coastal prairies, away from the shoreline. Different kinds of plant resources were available at different seasons. Acorns and pecans were available in the fall. The acorns were found along the shorelines in the mottes of oaks. The pecans were found in the river floodplains. The river floodplains provided various edible "greens." These were mainly marsh plants such as cattails. During the fall and winter the cattail roots are edible and were an excellent source of starchy carbohydrate. In the upland prairies, during the spring and summer, there were prickly pear cactus pads (spring) and the fruit or "tunas" in the summer. Berries were also available in the spring and mesquite beans were available in the summer.



Using the information from Figures 3.1-3.3 and Table 1, how were the food resources that were available for the Karanakawas used during the different times of the year?

Winter; Spring; Summer; Fall

- Based on the times and locations where the food resources were most predictable and concentrated would the Indians have been able to live in one area or would they have moved? Explain.

Table 1. Availability of Food Resources in the Texas Coastal Environment

Resource Category	Spatial Occurrence	Occurrence During Year
Mollusks	Concentrated (bay/lagoon margins)	Predictable, year-round
Fish	Concentrated (bay shallows, inlet areas)	Predictable, peak in fall-winter
Mammals		
Deer	Dispersed (prairies, wooded areas)	Predictable, year-round
Bison	Concentrated but mobile (prairies)	Predictable, year-round
Plants		
Greens	Variable	Predictable, spring
Fruits, seeds	Variable	Predictable, summer
Nuts	Concentrated (coastal fringe, wooded floodplains)	Predictable, fall
Roots	Variable	Predictable, fall-winter

Source: Ricklis, R. 1996. *The Karankawa Indians of Texas; An Ecological Study of Cultural Tradition and Change*. The University of Texas Press.

8. Based on the availability of major categories of food resources, a hypothetical model of the inferred patterns of fishing, hunting, and gathering of the Karankawas by seasons is given in Figure 3.4.

According to the model, what did the Karankawas probably use for food during each season?

Winter—

Spring—

Summer—

Fall—

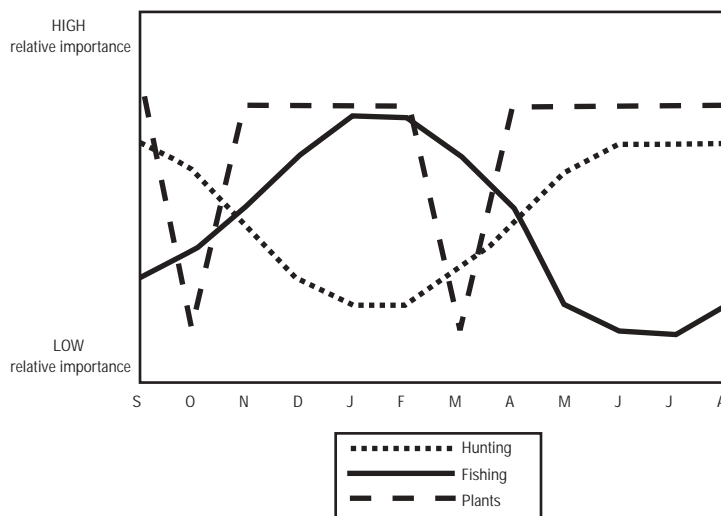


Fig. 3.4. Model of inferred pattern of fishing, hunting and gathering activities of the Karankawas. (Source: Ricklis: *The Karankawa Indians*)

9. Evaluate the model. Does the data from Figures 3.1-3.3 and Table 1 support the model in Figure 3.4? Explain.

10. The patterns of fishing, hunting and gathering in Figure 3.4 were inferred (concluded from evidence). What information would be needed to prove that the conclusions that were used to create the model in Figure 3.4 are correct?