Crayfish for dinner to those unenlightened Americans who live in abandoned ignorance in such northern fastnesses as Minnesota and Wisconsin means merely the juxtaposition of one can opener and one can of (preferably from Louisiana) Crayfish Bisque.

It is interesting, by the way, that the familiar spelling and pronunciation, "crawfish," is excellent English for, as Penn (1943) pointed out, this term was used in the United States as long ago as by Say in 1817 when, as part of that remarkable colony in Harmony, Indiana, he was making American zoological history; long years before, Huxley wrote his book on Crayfish, which extended throughout the English speaking world that name. Crayfish was derived from a French word, "crévette," which entered the English language when the Normans conquered England in 1066 A.D. Crayfish (or crawfish) in Louisiana connotes greatly more than a can opener for they mean catching the Crayfish in the guise of a pleasant day-long picnic, preparing them yourself in impeccable Southern style, either boiled or, if you have the time and energy, transformed into a memorable bisque.

Crayfish, biologically, are inestimably more important than an item on the menu of some famous New Orleans restaurant. They play an extraordinarily basic role in the relationships, technically termed "ecology," of a wide variety of native mammals, birds, reptiles and fishes that make up the usefulness of Louisiana wildlife, both for the sportsman and for the person who commercially exploits these resources.

They form extremely substantial and, in some instances, virtually critical elements in the wildlife food chain, not alone themselves serving as food, but also in other important relationships by destroying in early stages the vegetation that serve economically important species as subsistence.

It is the purpose of this article to set down as briefly as possible some of the known facts concerning our two important "eating" Crayfish, to indicate the wide variety of Crayfishes that do exist throughout the United States and Canada east of the Rocky Mountains, and to comment upon the odd circumstances that the Crayfishes of the Pacific Coast, having apparently found their long ago way across the long ago lost Bering Sea land bridge, belong to an entirely different group and have never in nature crossed the Continental Divide.

Virtually everyone in Louisiana knows much about Crayfish, even though many, like the writer, are too lazy to eat them unless some patient person has prepared them in the much more easily enjoyed form of Crayfish Bisque. Visitors from the North almost invariably express astonishment at the sight of the colored boys who in Crayfish season line the highways with, as their public relations operation, live Crayfish (to which they invariably refer as "bugs") dangling on threads at the end of upheld switches.

Crayfishes, in spite of their great commercial importance and their equally high importance as a basic element in the wildlife pattern (usually unrecognized), have been somewhat neglected in the matter of careful, scientific study of their life histories and the factors which control their abundance.

It is appropriate that two New Orleanians, Viosca and Penn, have made the most significant contributions to our Louisiana knowledge in this field.

Crayfishes are crustacea belonging to a large group composed of over eight thousand living species, technically known as the Decapods (so named because they possess ten walking legs). They include the Shrimps, Crayfishes, Lobsters, Hermit Crabs and Crabs, with the Crayfishes, Lobsters, Hermit Crabs and Crabs forming one constituent, more compact group, technically termed the Reptantia.

Estimate Production

Crayfish production figures can only be estimated since there is no tax or other revenue derived from them.

The United States production for 1888 was reported as 23,400 pounds with a value of $2,140, over a third of this quantity being ascribed to New Orleans.

United States Census Report for 1908 gave Louisiana production of 88,000 pounds with a value of $3,600.

William S. Werlla, Supervisor of Revenues of the Department of Wild Life and Fisheries, very kindly provided the writer with the following statement of Crayfish production for 1950. It must be pointed out that these returns are not obligatory and were simply included in other producer and dealer reports which were required by law. They are as follows:

<table>
<thead>
<tr>
<th>State Retail</th>
<th>Dealers</th>
<th>11,797 pounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Orleans</td>
<td>(French Mkt.)</td>
<td>49,359</td>
</tr>
<tr>
<td>Thibodaux</td>
<td>5,246</td>
<td></td>
</tr>
<tr>
<td>New Iberia</td>
<td>7,641</td>
<td></td>
</tr>
<tr>
<td>Baton Rouge</td>
<td>937</td>
<td></td>
</tr>
<tr>
<td>Vacherie</td>
<td>50,376</td>
<td></td>
</tr>
<tr>
<td>Belle Rose</td>
<td>25,150</td>
<td></td>
</tr>
<tr>
<td>Plaquemine</td>
<td>11,920</td>
<td></td>
</tr>
</tbody>
</table>

Total 162,426

It should be noted that Werlla believes that this represents only about ten percent of the actual Crayfish take, which would (Continued on Page 16)
In Picture No. 4 Papa scrapes the weeds and brush off the bottom of the marsh to make a neat place to put the net, and in No. 5, he shows the best technique in raising the net (sometimes there's 'crawfish' in it) as shown in Picture No. 6, and isn't long before Junior's big can is filled and there is definite prospects that there will be a "boil" before the day is over.

When the cookin's done and the "crawfish" are spread out for the feast, Junior can hardly wait and is the first one up to the table (Picture No. 10) and then (Picture No. 11) everyone 'goes to town' with a feast fit for the Gods.

An old fireplace on the picnic grounds is made ready for the "boil" with Papa and a helper (Picture No. 7) getting the fire started. In the meantime Mama and little sister (Picture No. 8) are getting the fixin's ready, such as onions, lemons, crab-boil and all the other condiments— and then in No. 9 everyone crowds around to get a whiff of the tantalizing odors as the "mud-bugs" are brought to a boil in the huge kettle.

Photos By Randee Picture Service
thus make the 1950 production of the order of 1,024,000 pounds.

Worlla further states:

"Crayfish are sold by the pound. At this time they are priced between 25¢ and 30¢ per pound. They are sold through wholesalers, retailers and producers to the consumer and processing plants. Processors convert crayfish into Crawfish Bisque, Crawfish Creole and these products are canned and sold throughout the United States. Crawfish may be prepared and served in most of the same ways as shrimp. They may be parboiled whole and then frozen and in that state they may be stored for an indefinite period.

"Crayfish are taken and processed in the Gulf States, but only in small quantities compared to Louisiana's production. I would estimate that Louisiana produces 80% of the crayfish in the United States. This is due to our climate and to the areas in Louisiana suitable for their propagation."

No Limit

There is no quantity limit imposed on the taking of Crayfish for any purpose in the State of Louisiana. Those commercially dealing in Crawfish require a license.

It should be here pointed out that the writer has constantly noted a general popular confusion of the name, "Sea Crayfish," with the completely different group, the fresh water Crawfishes, which are discussed in this article. The Sea Crayfish, also called the Spiny Lobster (and in the New Orleans markets chiefly known as Florida Lobster, Langoust and Langosta), is technically known as Panulirus argus. It is a rare animal in Louisiana since it abhors silted water. It actually belongs to a special group of shellfish, a group closely related, however, to the group which is composed of the much more closely related true Sea Lobsters and the Crawfish here discussed. The Spiny Lobster is extensively trapped in Florida, averages between one and two pounds in weight, but can reach six pounds and a body length of eighteen inches. It is completely a salt water species.

The productivity of a favorable Crawfish habitat can be extraordinarily high yet can be completely and with extreme rapidity swept away by drainage. The writer was at work. Conditions that year were evidently optimal since three young men using ten to fifteen Crawfish nets each and lifting them every five minutes (as many as forty Crawfish were taken in one lift of one net) caught in eight hours of work twenty-two sacks of Crawfish, a total of 2,420 pounds. (A sackful of Crawfish averages 110 pounds in weight). The price at that time was $10.00 a sack. The price this year at the beginning of the Crawfish season was $20.00 a sack paid to the fishermen by the dealers and the Crawfish were

Louisiana crawfishermen use wire square framed Crawfish nets twelve or fifteen inches in size with a one and one-half inch mesh. Frequently, these are knitted by the crawfishermen themselves. The same year (1949), the meadows were drained during the Summer and Autumn and Crawfishing there, once spectacular in production, completely ended.

Large Specimen

Viosca has recently brought to attention an interesting recent development in one Louisiana area, Bayou Pierre Part, where the native fishermen catch deep water Crawfish by means of traps constructed of one inch galvanized wire poultry netting, which take the form of modified mink pin traps (also, much like cage cone rat traps). The individuals in this deep water attain an exceptionally large size.

Viosca states that one fisherman operates three lines totaling one hundred and five traps which, lifted twice or three times a day, normally yield five hundred to one thousand pounds of Crawfish, the maximum being fourteen hundred pounds.

A number of different species of Crawfish occur naturally in Louisiana but of these only two are important as human food. The others, however, as will be later made clear, play, in spite of and actually, often because of their smaller size, a basic role as food for other forms of wildlife. The two market kinds of Crawfish are the Red Swamp Crawfish which occurs in Louisiana wherever there are suitable habitats, which range from lake edges, bayous, ponds, ditches, marshes and swamps in which the water is either fresh or slightly brackish. It is typically a shallow water Crawfish. Various technical names have been applied to it but it is best known scientifically as Procambarus clarkii Girard. The other market species, the White River Crawfish, as it is often called, is presently known technically as Procambarus blandinii aecutus (Girard). Penn (1941) states that it: "... is typically an upland species, being found mostly in the upland piney-wooded, sandy-bottomed, swift flowing streams as well as hillside ponds. It is also found to a lesser extent in the Mississippi River and in the lowlands, sometimes alongside clarkii in ponds; but generally the two do not thrive together, and one is usually much more abundant than the other in a given pond."

The large Red Swamp Crawfish, which is one of the most common Crawfish species in Louisiana, provides the bulk of the Louisiana crop.

Abundant in Marshes

The most comprehensive contribution to our knowledge of the life history of the Red Swamp Crawfish (Procambarus clarkii) is that provided by Penn (1943). Penn states that this species is most abundant in marshes ranging from purely fresh to brackish water. It spends its early life in the deeper water (two to three feet) in shallow marsh lagoons and as it matures and the breeding season approaches, it migrates to the six inch depths of the shallower water of open marshes. Penn found that at Chalmette, (Continued on Page 20)

Here's one of the best examples of the size of Louisiana's choice crawfish.