

**Florida pompano,
Trachinotus carolinus
(Linnaeus, 1766)**



Florida pompano occur in western Atlantic coastal waters from Cape Cod, Massachusetts to southeastern Brazil. In U.S. waters, they are uncommon north of Chesapeake Bay. Pompano are found year-round in Florida but move north and south in response to the 15 °C isotherm in nearshore waters (Berry and Iverson 1967). Florida pompano mature before reaching a total length (TL) of 14 inches (Finucane 1969). Mature fish have been found as small as about 10 inches fork length (FL) and as young as age 1 (FWC-FWRI, unpublished data). The oldest fish examined in an FWC-FWRI study was estimated to be 7 years old. Spawning is thought to occur in offshore waters, e.g., near the Gulf Stream at 660' depths (Fields 1962). Peak spawning activity occurs during the spring and fall (Finucane 1969).

Table 1. Von Bertalanffy growth parameters and length-weight relations for pompano

| Inches FL = $L_{\infty} (1 - e^{-K(\text{age}-t_0)})$ | K | L_{∞} (inches FL) | t_0 (years) | Source |
|---|------|--------------------------|---------------|-----------------------------|
| Male, Atlantic coast, Florida | 0.13 | 18.3 | -5.6 | Murphy <i>et al.</i> (1996) |
| Female, Atlantic coast, Florida | 0.27 | 18.1 | -2.4 | Murphy <i>et al.</i> (1996) |
| Male, gulf coast, Florida | 0.37 | 14.3 | -2.6 | Murphy <i>et al.</i> (1996) |
| Female, gulf coast, Florida | 0.55 | 15.3 | -1.2 | Murphy <i>et al.</i> (1996) |

| Weight in lbs = $a (\text{inches FL})^b$ | a | b | Source |
|--|----------|-------|-----------------------------|
| Male, Atlantic coast, Florida | 0.001292 | 2.821 | Murphy <i>et al.</i> (1996) |
| Female, Atlantic coast, Florida | 0.002943 | 2.501 | Murphy <i>et al.</i> (1996) |
| Male, gulf coast, Florida | 0.00150 | 2.773 | Murphy <i>et al.</i> (1996) |
| Female, gulf coast, Florida | 0.00110 | 2.901 | Murphy <i>et al.</i> (1996) |

Pompano are generalized benthic feeders that use large well-developed pharyngeal plates to crush hard-shelled prey (Bellinger and Avault 1971). In Tampa Bay, small juvenile pompano (0.6–1.8 inches standard length) shift from eating amphipods, dipteran larvae, and coquina clams to eating larger crustaceans, mollusks, and occasionally fishes. Diets of adult pompano from the Indian River lagoon consist primarily of infaunal bivalves (Armitage and Alevizon 1980). In Tampa Bay, adults chiefly eat mussels and penaeid shrimp (Finucane 1969).

During 2009, the estimated landings of Florida pompano in Florida were 749,685 pounds. Recreational anglers accounted for about 54% of the total statewide landings. About 52% of the statewide landings were made on the gulf coast. Commercial landings were made mostly in the area from Volusia through Palm Beach Counties on the Atlantic coast and in Collier County on the gulf coast (Fig. 1a). High landings of pompano made by the recreational fishery were distributed throughout all regions except in Monroe County (Fig. 1b).

The 2009 total landings were 20% lower than the average landings in the previous five years (2004–2008) and were 17% lower than the 1982–2009 historical average landings (Fig. 2). Total annual landings fluctuated on the Atlantic coast with a peak in 1990 followed by a decline

through 1996 and large fluctuations around an annual average of 0.5 million pounds during 1997-2009 (Fig. 2). Gulf coast annual landings also fluctuated without trend until 1992, when they began a slow decline that lasted through 1996. Total annual landings increased sharply on the gulf coast in 1997, averaging 0.65 million pounds through 2001, generally declined through 2004, increased to over 0.6 million pounds through 2006, and followed by a decline through 2009 to 0.4 million pounds.

Commercial catch per trip for Florida pompano increased rapidly on both coasts between 1993 and 1997 and has remained stable at these higher levels since then (Figs. 3a-b). Recreational catch rates on the Atlantic peaked in 1997, declined through 2001 and have trended slightly downward through 2009 (Fig. 3c). On the gulf coast, anglers' catch rates have been low and relatively stable since at least 1992 (Fig. 3d).

Relative indices of abundance for young-of-the year (YOY) Florida pompano have been low on both coasts, but showed their highest levels during 1999-2001 and 2004-2008 on the Atlantic coast and in 1999 and 2006 on the gulf coast (Figs. 4a and 4b). Relative indices of abundance for post-YOY Florida pompano varied without trend on the Atlantic coast with the highest values in 1998 and 2005 (Fig. 4c). On the Gulf coast the post-YOY index of abundance has varied cyclically; increasing from 1997 through 1999, decreasing thereafter through 2002, and then increasing through 2007-2008 (Fig. 4d). Gross external abnormalities on the Gulf coast were greatest in 2008 (Fig. 5b) and were predominately made up of skeletal abnormalities (Fig 5d). On the Atlantic coast, the prevalence of gross external abnormalities was greatest in 2000 (Fig. 5a) and was equally due to fin rot and ulcer/lesions (Fig. 5c).

The 2005 stock assessment (Murphy *et al.* 2008) indicated that Florida pompano population biomass estimates for the Atlantic and Gulf coasts generally exceeded the minimum stock size threshold (MSST), so populations on both coasts were presumed to not be overfished in 2005. The certainty of this status determination was lower on the Atlantic coast due to one estimate of vulnerable biomass in 2005 being slightly lower than the threshold, as well as a highly uncertain yet low estimate (25%) of static spawning potential ratio for the Atlantic in 2005. Estimates of pompano stock size relative to the MSST have generally been higher since 1995 (with the exception of the surplus-production based 2005 estimate) on the Florida Atlantic coast. On the Gulf coast, the estimated stock size has been greater than the threshold since at least 1981.

a. Commercial landings (pounds)

b. Recreational landings (numbers)

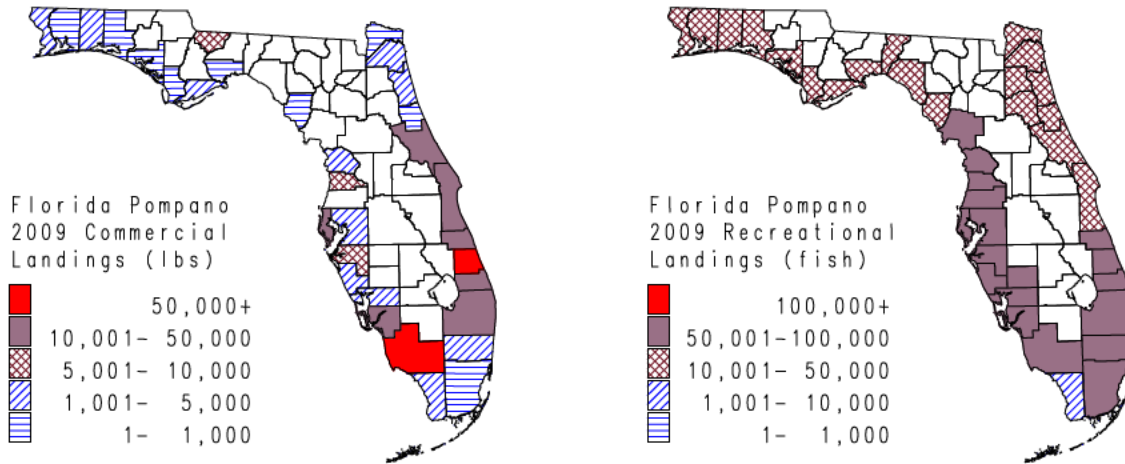


Figure 1 (a)-(b). Geographic distribution of Florida pompano landed during 2009. (a) Commercial landings (pounds) by county; (b) Recreational landings (numbers of fish) by region.

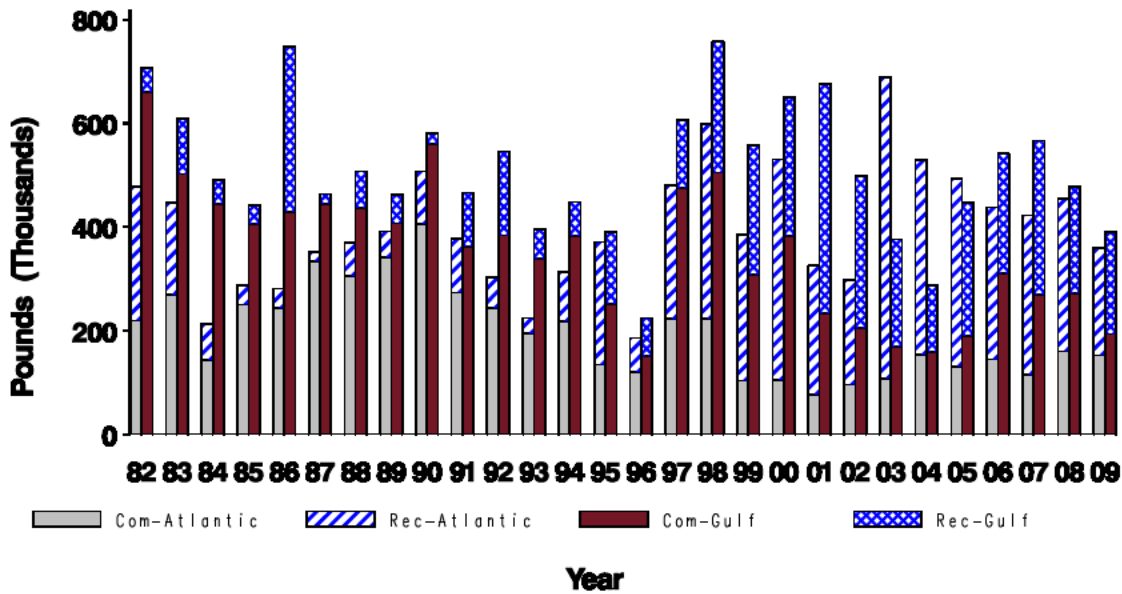
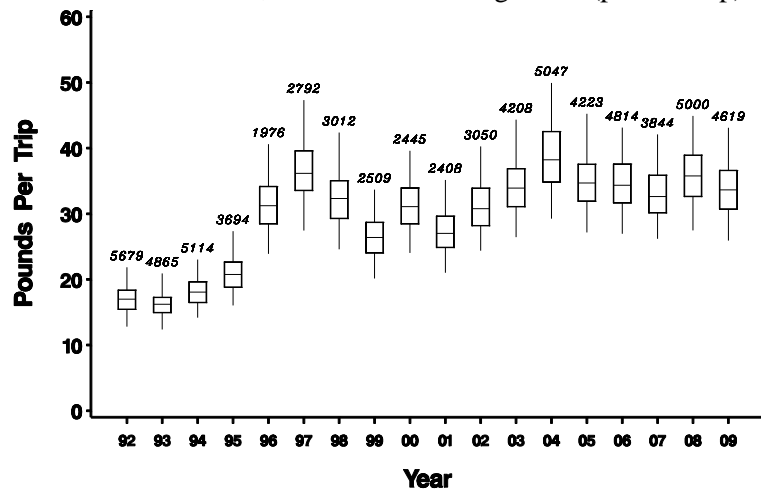
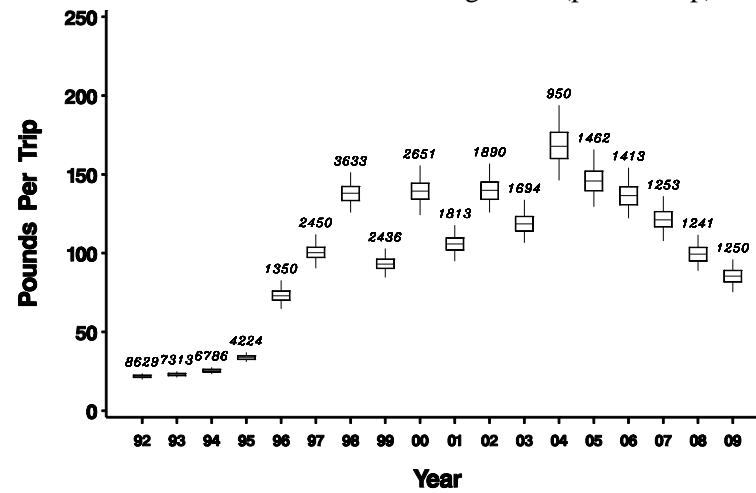


Figure 2. Total annual landings (pounds) of Florida pompano on the Atlantic and gulf coasts of Florida, 1982–2009.

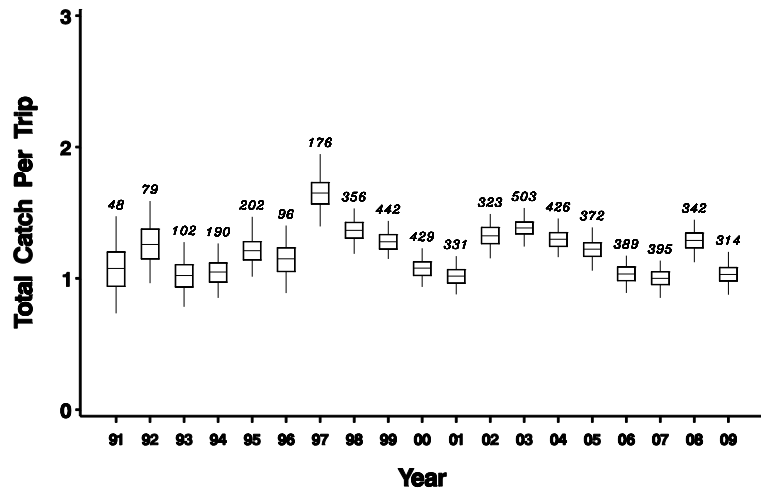
a. Atlantic Coast, commercial landings rates (pounds/trip)



b. Gulf Coast, commercial landings rates (pounds/trip)



c. Atlantic Coast, recreational total catch rates (numbers/trip)



d. Gulf Coast, recreational total catch rates (numbers/trip)

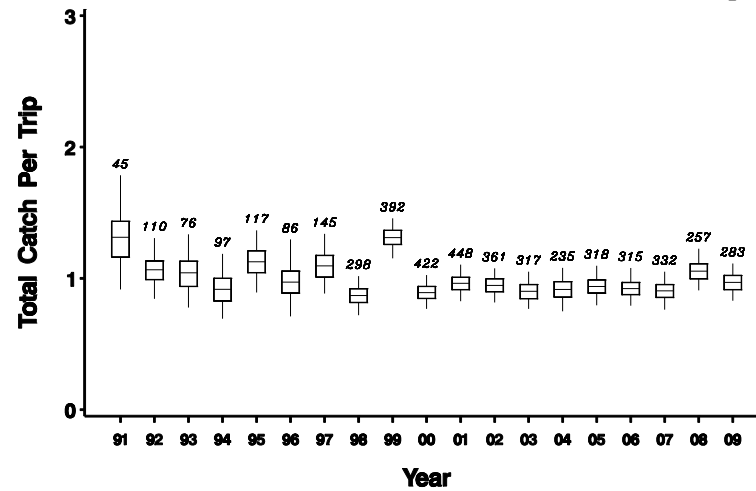


Figure 3 (a)-(d). Annual standardized catch rates for Florida pompano in Florida. Commercial landings rates (pounds/trip), 1992-2009: (a) Atlantic Coast; (b) Gulf Coast. Recreational total catch rates (numbers/trip), 1991-2009: (c) Atlantic Coast; (d) Gulf Coast.

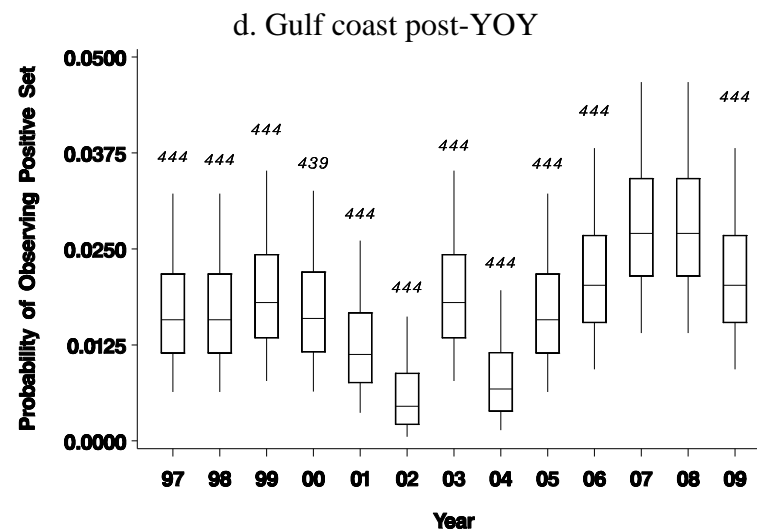
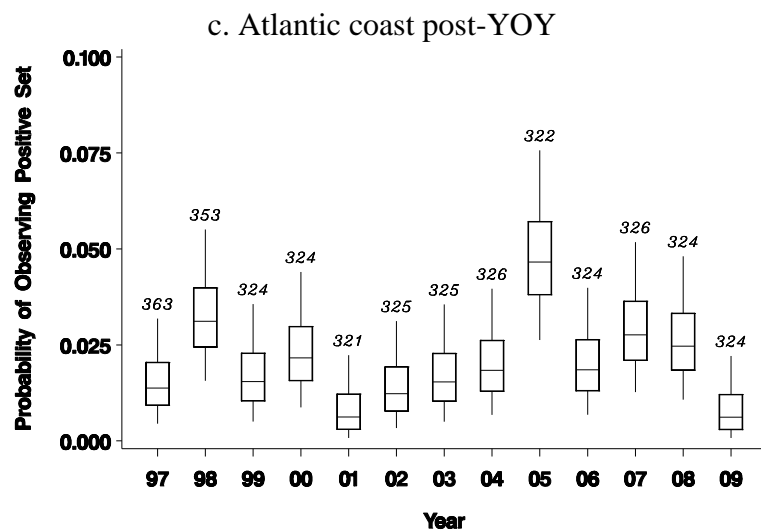
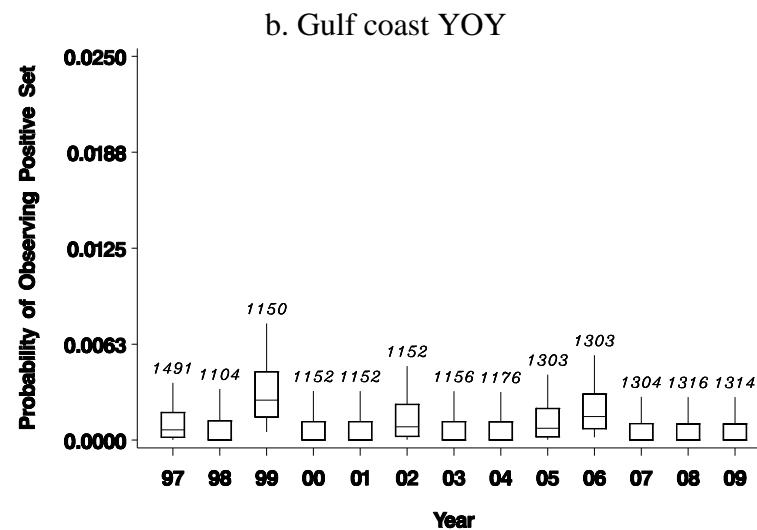
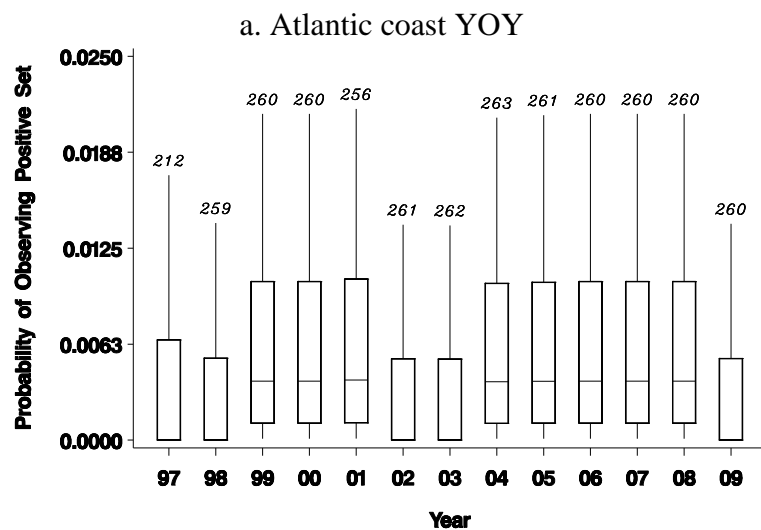
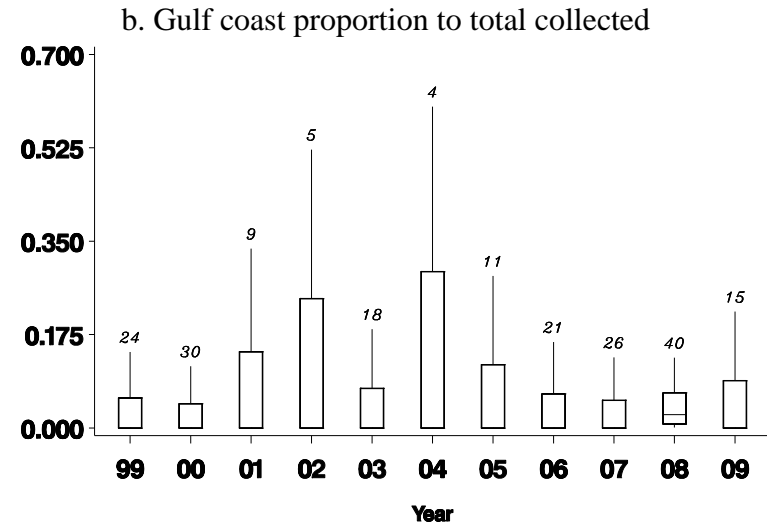
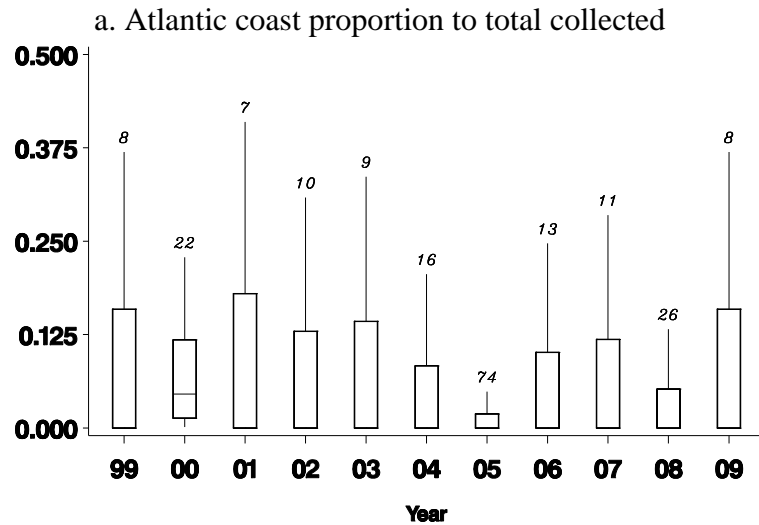
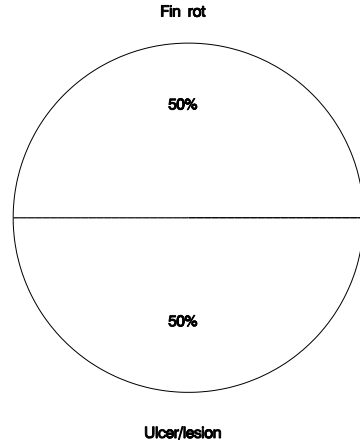


Figure 4(a)-(d). Proportion of fishery-independent-monitoring sets that captured Florida pompano from 1997-2009. Young-of-the-year (YOY): (a) Atlantic coast; (b) Gulf coast. Post-YOY: (c) Atlantic Coast; (d) Gulf coast.



c. Atlantic coast percentage of abnormality types
Percentage of gross external abnormalities



d. Gulf coast percentage of abnormality types
Percentage of gross external abnormalities

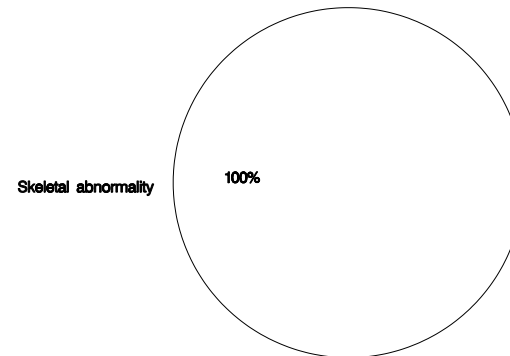


Figure 5(a)-(b). Gross external abnormalities of Florida pompano $\geq 75\text{mm}$ collected in fishery-independent-monitoring sets, 1999-2009. Breakdown of gross external abnormalities by coast: (a) Atlantic coast; (b) Gulf coast. Percentage of abnormalities by type: (c) Atlantic Coast; (d) Gulf coast