

PRODUCT ROUNDUP

A new fish-forecasting service can increase your productivity

By Mark S. Betz

Knowing just exactly where to fish has been a pseudo-science ever since fishermen first threw hooks overboard centuries ago. In the past, reports from the grounds, historical trends and guesswork have led fishermen on wild goose chases in search of fish. But now there appears to be a better way — at least for East Coast fishermen.

Dr. Mitchell Roffer, a fisheries oceanographer, has founded Roffer's Ocean Fishing Forecasting Service (ROFFS), a business dedicated to bringing the commercial and recreational fisherman up-to-the-hour information on such important specifics as ocean water temperature, color, coastal circulation patterns and river plume locations. Such information, Roffer says, can help lead the boats to the fish and allow for greater productivity, decreased operating expenses and larger profits.

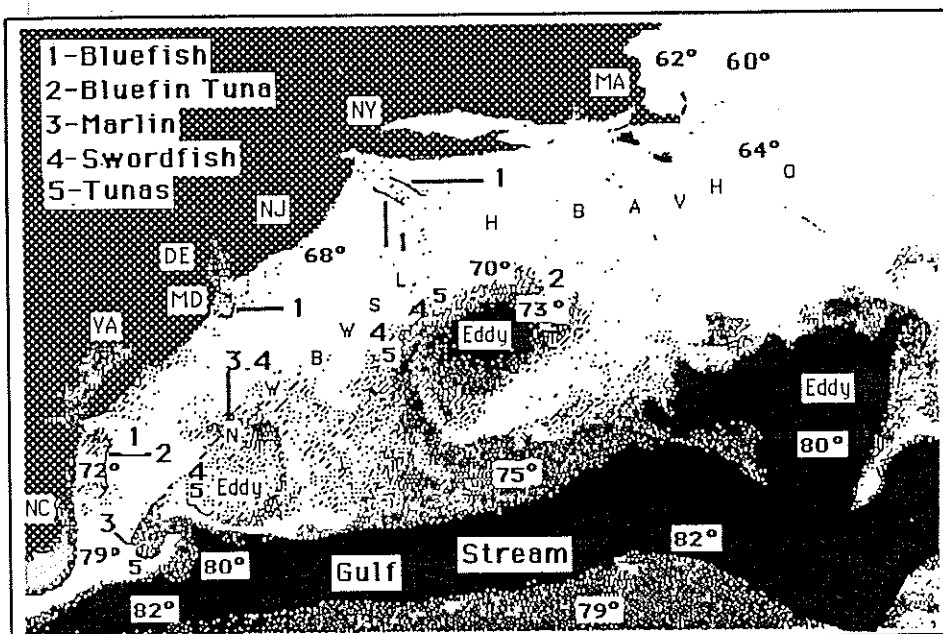
Based on research undertaken during his 10 years with the University of Miami's Rosenstiel School for Marine and At-

mospheric Science, Roffer has concluded that specific conditions within the earth's oceans greatly influence the locations of concentrations of fish. Temperature gradients as well as changes in color and flow all seem to channel schools of fish into certain areas found to contain conditions optimal for the survival of a given species.

These "preferred habitats" change location constantly, causing the movement of fish from area to area. Until a few years ago, these movements were considered either random or totally instinctive.

Roffer has proven the accuracy of his findings time and time again. Combining his insights with the growing availability of satellite data, as well as information from ships and buoys, Roffer was able to accurately predict bluefin tuna landings in specific areas over two seven-week periods in 1980 and 1981.

Roffer also collaborated with the New Jersey Sea Grant program to provide data



A typical ROFFS offshore chart looks like this, except subscribers have overlays indicating loran lines, lat/long and additional bottom topography. The major canyons are indicated by the first letter in their names, i.e., N indicates Norfolk Canyon, O indicates Oceanographers Canyon, etc. Surface water temperatures are indicated in degrees Fahrenheit, but are also available in degrees Celsius. Numbers 1-5 show either areas where certain fish have been landed in the past day or areas where ROFFS suggests one should fish. The standard ROFFS chart usually contains more detail because it actually consists of two charts for each forecast region — inshore and offshore.

to swordfishermen in an effort to increase landings and save fuel. By keeping track of water conditions present when good catches were made and then locating areas of simi-

lar conditions, fishermen were consistently able to find fish faster. In fact, the American Swordfish Association reports (Continued on Page 34)

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fuel savings in 1981-83 of \$2.25 million for the East Coast fleet, owed in large part to the data provided by Sea Grant and Roffer.

Although somewhat similar information has been available to fishermen and the general public for several years, ROFFS believes it has many custom services that offer distinct advantages over those provided by public organizations such as NOAA and Sea Grant. Although these institutions do provide some data useful to fishermen, the charts are often confusing and in a scale too large to be of use to individual captains, Roffer claims. In addition, the data is often available only after it is one to two days old.

ROFFS, on the other hand, offers subscribers custom-made charts which can be updated from four to 48 times a day, drawing on information taken from satellites, ships at sea, ocean buoys and fishing vessel reports. These charts can be tailored to a specific fishery, showing both large-scale features, such as Gulf Stream eddies, and smaller-scale phenomena, such as river plume location and orientation, as well as local temperature and circulation patterns. All ROFFS services are available 24 hours a day, on a schedule devised to meet the needs of individual users.

Currently, ROFFS charts are available

through mail, both electronic and overland, via telecopier facsimile, telephone and single sideband radio. Additionally, ROFFS is developing a communications system that will allow subscribers to receive their services privately while at sea.

ROFFS charts are in use by a diverse group of fishermen, ranging from swordfish and tuna longliners to New England harpooners to mackerel hook-and-liners.

A Gloucester, Mass., gillnetter, lobsterman and tuna harpooner (who declines being identified for fear of becoming the pied piper of the local fleet) has been using ROFFS for two years and considers the reports extremely accurate. "When I'm fishing tuna in the summer, I'm likely to be anywhere from Block Island to Maine," he says. "If you know where the temperature changes are, you're ahead of the game."

Roffer presently offers charts for all regions in the North Atlantic Ocean, the Gulf of Mexico and the Caribbean. Prices vary, but the basic subscription, which includes three charts a week in one region for 12 weeks, goes for \$200.

For more information and literature describing the biological and technical foundations of Roffer's work, contact Roffer's Ocean Fishing Forecast Service, 8542 S.W. 102nd St., Miami, FL 33156, tel. (305) 274-5759. USE 271-9229 □