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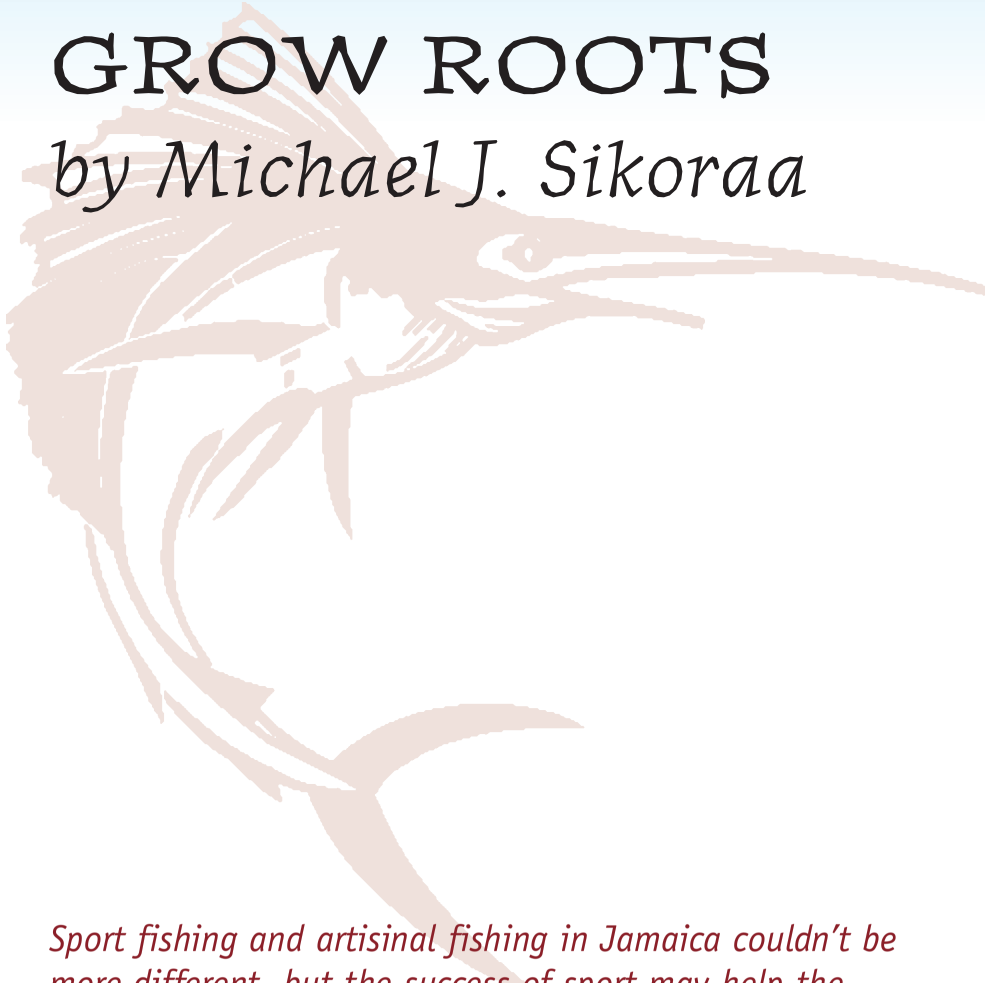
MARLIN TOURNAMENTS GROW ROOTS

by Michael J. Sikoraa



Sport fishing and artisinal fishing in Jamaica couldn't be more different, but the success of sport may help the hard-working everyday fisherman more than you think.

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About the only thing sport fishing and artisinal fishing in Jamaica have in common is the Caribbean Sea, but that may soon change. Sport fishing is typically the domain of the wealthy with large expensive yachts, fancy rods and lures, unlimited gas, cavernous coolers, and even bigger game fish. The deep sea is their proving ground and participants come from across the Caribbean region, especially the Bahamas and the Cayman Islands, to compete for the biggest marlin or largest total catch in Jamaica's circuit of fishing tournaments. Cash prizes and bragging rights are up for grabs.

Artisinal fishers, on the other hand, exploit the sea in very different ways and for very different reasons. A typical north coast* fisherman may or may not own a small wooden or fiberglass boat, which may or may not have an outboard engine on it. He (there are literally no women artisinal fishermen, at least not in the central north coast area) usually relies on five or six traps for the majority of his fishing income. These traps—or fish pots—are constructed

**This article deals with the north coast fishery of Jamaica whose geographic characteristics of a narrow island shelf, close-to-shore reefs, and small fishing area are distinctly different from the south coast fishery, whose reefs lie far off shore and are separated from the coast by a large shallow bank area. Due to these geographic differences, the two fisheries are considerably different in their catch statistics and value, and only the north coast is considered in this article.*

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Fisheries Institute, 54th annual meeting, Providenciales, Turks & Caicos Islands, 12 ñ 17 November, 2001.

Van Barneveld, W., Z. Sary, J.D. Woodley, M. Miller, and M. Picou-Gill. 1996. Towards the co-operative management of fishing in Discovery Bay, Jamaica: the role of the Fisheries Improvement Project. Gulf & Caribbean Fisheries Institute, 44th annual meeting, Nassau, Bahamas, November 1991, p. 195-210.

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significant number of local fishers, and once they are familiar with alternative fishing methods such as the long-line, the University of the West Indies hopes to facilitate the local management and sense of ownership of pelagic fish stocks which, today, or primarily accessible to the upper class and to foreigners. The gear purchased by DBML and funding agencies will be handed over to the community for their own continued use. Community-level natural resource management is the quintessential paradigm for sustainable development, and Discovery Bay fishermen are moving, albeit slowly, in this direction. Then again, nothing happens quickly in Jamaica. This fishing community's efforts could lead the drive towards the mobilization of fishing communities all along the north coast, and thus the drastic improvement of living standards amongst artisinal fishermen. By taking control over their own resource, fishers will at the same time be initiating the conservation the limping reef fishery, and this may provide hope for the algal reefs of the north coast. An earlier attempt to designate a reef fishery reserve was successful but only for a limited time before the pressure to catch and earn more led many obliging fishermen back into the reserve. Then, there was no alternative option to compensate for the loss of an area of fishing grounds. With this pelagic promise, however, there is an alternative, and the designation of a fishery reserve, considered essential for the rejuvenation of the reefs to occur, will acquire renewed interest and motivation. Reduction of fishing pressure on the reefs around Discovery Bay, long overdue, may then soon occur.

However unlikely it may seem, the success of deep sea sport fishing and the exhaustion of the artisinal reef fishery are leading to a new chapter in community development and grass roots natural resource management. If this new direction continues as successfully as it has begun, the real winners from sport may turn out to be those who are not even amongst the competition.

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out of hand-chopped wooden poles, wire mesh, binding wire, and nails and "soak" for four or five days. Upon retrieval they typically yield a catch of about seven fish that weigh a total of two pounds. Prized fish such as snapper and grouper are scarce, and the species that are caught (parrotfish, doctorfish, jacks) are often undersized. Secondary gear include hand lines, occasionally bringing in a barracuda or dolphin (or mahi mahi, not the Flipper dolphin), or gill nets which catch small sprat. Spear fishermen are considered independently from traditional trap, hook and line, and net fishermen, as they typically do not own a boat and can enter the water from anywhere and are thus not subject to recent fisheries studies based at fishing beaches. Fish are sold or cooked on the landing beach where there is no refrigeration, and the small-and-getting-smaller catches add up to around US $1,800 per year per fisherman. This income is usually not enough to support the fisherman's family of four or so other individuals, and so many artisinal fishermen must seek additional employment opportunities just to get by.

Despite the poor state of this resource, economic hardship continues to drive men into fishing, as reef fishing is an open access resource that can be exploited at a relatively low cost. The poor catches of north coast fishermen are a result of decades of intense fishing pressure, environmental neglect, and natural destruction by hurricanes. The reefs along the north coast of Jamaica, including popular tourist areas such as Montego Bay and Ocho Rios, are, in many places, severely degraded and amongst the most over-fished in the entire Caribbean. Scientists have begun to describe many of these reefs as "algal reefs," rather than coral reefs, as a result of the overgrowth of algae and the loss of live coral cover. The removal of herbivorous fish like parrotfish and doctorfish that would feed on this algal feast only makes matters worse. In order to facilitate the regeneration of these reefs and their fish populations, the intense fishing pressure must be reduced. Continuing at the current rate of exploitation, there is little hope for a more productive reef environment.

While the in-shore reef fishery is severely degraded, highclass off-shore sport fishing tournaments are very successful, and the annual Port Antonio Marlin Tournament is the premier marlin tournament around. But marlin are not the only fish being caught in the deep sea (which, due to the narrow island shelf all along the north coast, is very close to land). Tuna, dolphin (the "sweetest fish in the sea," according to many Discovery Bay fishermen), kingfish, jacks, and wahoo are some species of commonly-caught fish that live in the open sea. In the Discovery Bay tournament, for example, nine fishing boats caught a total of 900 pounds of fish! That's 100 pounds of fish per boat per nine hour fishing day. Not only are the fish being caught in these tournaments significantly LARGER than the below-average-size reef fish caught by the artisinal fishers, but, if sold on the hotel market, fetch higher prices than the going rate of $120 Jamaican dollars (about $2.40 US dollars) that fish sell for

on fishing beaches. This pelagic fishery could provide a significant improvement on the size and value of fish catches for artisinal fishermen. The problem is persuading traditional fishermen to opt for pelagic fishing rather than continuing the onslaught against the reefs.

There are some artisinal fishermen who exploit the off-shore resource, but only a handful. Based out of the resort towns on the north coast, these fishermen earn a considerable amount more than their reef-fishing counterparts selling their bigger fish to hotels. But most people do not own boats capable of exploiting this resource safely or efficiently. The fishermen who do go off of the island shelf only drag two or three lines behind their boat as they motor around for a couple hours until their gas runs out. They may make three, four, five trips without catching anything, or they may make one trip and catch a "whole heap" of fish. But gas costs money, and so the risk of returning to land without a catch can deter fishermen from attempting to fish in the same areas that sport fishers exploit.

Academics and scientists at the University of the West Indies' Discovery Bay Marine Laboratory (DBML) are mobilizing local fishermen to expand the artisinal exploitation of the pelagic fishery resource, based on the successes of sport fishing tournaments and their catch statistics. These two groups have worked together before, as DBML initiated the Fisheries Improvement Programme in the late '80s in an effort to begin to address the problems of an over-exploited fishery. The relationship has been on-and-off since, but this new project has brought these parties together again. Of course, this pelagic development business is by no means an easy task. Artisinal fishing in Jamaica is a very traditional pastime, and the prospect of new ways of fishing is usually met with a stubborn glare and "dat naah fi me" or "no dat naah go wuk." This change in methods involves the crossover into an entirely different ecosystem with different members than the familiar reef environment. DBML figures the best place to begin is to invite local fishermen to participate with lab staff in conducting a stock assessment of the pelagic fish that live in the deep waters off Discovery Bay. The deal is simple: fishermen come along, bring some bait or some personal gear, the lab supplies some additional lines, hooks, weights, gasoline, and a boat with driver. Fishermen fish. What they catch they keep for personal consumption or sale. First, though, the lab records information about fishing methods and locations. We weigh the catch. Measure it. Take out its sex organs. Weigh them. Stick our hands in its stomach and look at what comes out. We want to know what kind of fish are out there, where they are, how many of them there are, what they like to eat, when they reproduce, and what the best way to catch them is. Add to this the data collected from sport fishing tournaments, and we begin to see patterns in preferred bait, fishing times and locations, and seasonality.

This partnership between academia and fishermen begins with a fishing method that most fishermen have some familiarity with: trolling. We cruise around for a day pulling four or five lines and hope we get lucky or spot birds feeding, which usually signifies the presence of the larger fish we're looking for. This is how deep sea fishing has always been done amongst the small portion of deep sea artisinal fishermen. But the project is growing now, and we are gearing up to evaluate alternative fishing methods such as long-lining. The term "long-line" is usually accompanied by a very negative connotation amongst environmentalists. Huge, industrial long line fleets from wealthy nations like the United States and Japan can set lines 30 miles long with thousands of hooks as they target swordfish. The catches from these non-selective devices include way-too-high amounts of by-catch, or non-targeted species that bite the hook anyway, are pulled on board, and then, dead, dying, or injured, are swept overboard. We do not aim to reproduce these destructive methods. On an artisinal level, a long line does not reach more than one or two miles long, and Jamaican fishermen eat whatever fish they can catch. Little, if anything, is wasted. Applying the results of our assessment we can improve our fishing routine and chances of catching targeted species of fish. We are promoting the low-level exploitation of this resource, and the lack of widespread local knowledge and gear for such fishing methods precludes the prospect of an artisinal pelagic fishery meeting the same fate as the reef fishery. Furthermore, the catches from improved trolling practices alone should result in a more valuable catch than the current reef fishing effort.

Our partnership is beginning to pay off. One day we returned to shore with 140 pounds of tuna. A day earlier, some fishermen had decried our project, methods, and prospect of success. That day, they were asking when they could participate. As this project between the local fishing community and the marine laboratory grows, more and more fishers are being exposed to alternative deep sea fishing methods, and the more this happens, the less fishermen rely on the ailing reefs to provide a catch. Some fishermen will continue to rely on this traditional resource, but a successful pelagic fishery will significantly reduce the amount of people, and thus the amount of traps, nets, and spears, that fish the reef for sustenance. Of course, supporters of the sport fishing tournaments may argue that our efforts are threatening to the success of their sport, but the deep sea is a big place, and many of the fish species that live in these waters typically cover a large area in their life-times. The chances of a small scale artisinal pelagic fishery ruining the success of these tournaments is miniscule. Furthermore, the right to exploit this fishery lies first and foremost with the people of Jamaica who rely on fishing every day to support themselves and their families, rather than those who enjoy a recreational weekend fishing trip a couple times per year.

Still, the project is in its infancy. Once DBML is able to attract the interest of a