

State of Hawaii  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
Division of Aquatic Resources  
Island of Hawaii

January 2000

Aquarium Collecting in West Hawaii:  
A Historical Overview

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The aquarium collecting industry in West Hawaii has had a long contentious history. As early as July 1973, public concern over collecting activities prompted the Division of Fish and Game to suspend the issuance of Aquarium Fish Permits. The Division had received legislative authority to regulate the use of fine mesh aquarium nets and issue permits twenty years earlier. The suspension was lifted one week later. The stated reason for doing so was "to enable the Division of Fish and Game to investigate an alleged decline in the population of colorful shallow water marine fish species without disrupting the activities of the tropical fish aquarists". It was at this time that aquarium permittees were first required to submit monthly fish catch reports.

Shortly after the suspension was lifted, the 10-member State Animal Species Advisory commission recommended restricting issuance of aquarium fish permits pending "full and extensive study". At a September 1973 meeting called by Fish & Game, a number of university marine scientists recommended the "careful selection of specified sanctuary areas of limited extent and the prohibition of collecting within their confines." No studies were conducted and no sanctuary areas were ever established.

Five years later a conference on tropical reef fish, sponsored by the University of Hawaii Sea Grant Program was held in Kona. The stated purpose of the conference was "to provide those involved or interested in the tropical fish resource...(with)...a better understanding of this resource". At the conference, the Fish and Game biologist noted that there had been "a dramatic increase in the number of aquarium fish permits issued." With regard to catch information he noted that the Division had been compiling aquarium fish catch data since 1973 but that the reliability of these data depended upon the sincerity of the permittees. The biggest problem he noted was the analysis of the data. "Only adequate funding will allow us to make a complete evaluation of these data."

Fish and Game paid little attention to the issue of aquarium collecting for almost another 10 years. Meanwhile the number of collectors in West Hawaii continued to increase, and conflict escalated particularly between dive tour operators and collectors. This conflict led to a meeting of the two groups in July 1987. Encouraged by DAR (formerly the Division of Fish and Game) and Sea Grant, an informal "Gentleperson's Agreement" was worked out whereby aquarium collectors agreed to refrain from collecting in certain areas. In return, charter operators agreed not to initiate legislation-opposing collecting and to cease harassment. The four areas agreed to total approximately four miles and

the agreement was to be on a year to year basis. According to the tour operators the agreement worked reasonably well for about six months in spite of the fact there were a small number of collectors who refused to abide by the agreement.

When the agreement expired the next year, collectors reportedly resumed collecting in the previously closed areas. In August & September of 1988, meetings were held to reinstate the agreement and permanently close the previously agreed upon areas. Requests by the dive operators for additional closed areas and further controls on collectors were not agreed upon. The areas from the Gentleperson's Agreement were incorporated in the Kona Coast Fisheries Management Area (FMA) which became effective October 1991. The following year an independent initiative established a Marine Life Conservation District (MLCD) of 1.3 mi. at the Old Kona Airport. MLCDs as a rule prohibit the taking of marine life, which precludes aquarium collecting.

Over the next several years, controversy and conflict over aquarium collecting continued unabated. Various meetings were held and legislative resolutions and bills attempted to address the issue. In May of 1996, a House Resolution (HCR 184) requested DLNR, in conjunction with a task force convened to assist them, to develop a comprehensive management plan to regulate the collection of aquarium fish.

Thus was born the **West Hawaii Reef Fish Working Group** (WHRFWG) which held its first meeting May 31, 1996. Individuals from various West Hawaii constituency groups were invited to participate. A determined effort was made by DAR & Sea Grant to have representation from each group that used reef resources. Others who became aware of the group either by word of mouth or through the newspaper were also welcomed to participate. At least 70 members of the West Hawaii community were involved. The group, led by a trained facilitator, held nine meetings over a 15-month period. Information to assist decision making was presented by scientists, resource management experts, and Hawaiian community members. Individuals from the Great Barrier Reef Authority, and the Universities of Montana and Washington as well as local experts Drs. Jack Randall, Bruce Carlson, Richard Brock, Kimberly Lowe and myself presented.

The WHRFWG was successful in a number of ways. It opened a dialog between user groups and community members. It provided a forum for the education of its members on a wide range of social and biological issues involved in resource management including aquarium collecting. The group identified "hot spots" along the coast where conflict over ocean resources was especially intense. It also proposed a wide range of management recommendations, some of which were included in the 1997 DAR legislative package. Working directly with the people of Ho`okena and Miloli`i, Dr. Kimberly Lowe of DAR developed proposed comprehensive FMA rules for these communities. To finally begin to investigate the biological impact of collecting, DAR commenced a joint research project with the University of Hawaii Hilo.

Unfortunately, due in part to opposition by Oahu aquarium collectors and legislative inertia, only one legislative recommendation of the WHRFWG passed; that establishing licenses for aquarium exporters. Similarly, recommendations involving DAR administrative rule changes languished.

In response to the perceived lack of success in adequately dealing with aquarium collecting, a number of citizens, including several members of the WHRFWG formed a

grassroots organization, the **Lost Fish Coalition** (LFC), to push for a ban on aquarium collecting in West Hawaii. They collected almost 4000 signatures on a petition to ban collecting. In January 1997 Representative Paul Whalen (R-Kona, Ka`u) introduced HB 3349 which banned all collecting between Kawaihae and Miloli`i. Shortly thereafter, Rep. David Tarnas (D-N. Kona, S. Kohala) introduced HB 3457. This bill established a West Hawaii Regional Fishery Management Area along the entire West Hawaii coast (Upolu Pt. to Ka Lae) to provide for effective management of marine resources. Among several provisions of this bill was a requirement to set aside 50% of the FMA as Fish Replenishment Areas (FRAs) where aquarium collecting was prohibited. In February 1998 HB 3348 was killed. During committee hearings of HB3457, the 50% provision for FRAs was reduced to "a minimum of 30%". Aquarium collectors and other user groups endorsed the bill. It was approved by the legislature and ultimately became Act 306, effective 13 July 1998.

Act 306 established a West Hawaii Regional Fishery Management Area along the entire west coast (147 miles) of the Island of Hawaii. The purposes of Act 306 are to (1) Effectively manage fishery activities to ensure sustainability; (2) Enhance nearshore resources; and (3) Minimize conflicts of use in this coastal area. Included in the Act is a mandate to designate (in less than three months) "a minimum of 30%" of West Hawaii coastal waters as FRAs. Additionally the Act also directed DLNR/DAR to identify these areas "after close consultation and facilitated dialogue with working groups of community members and resource users."

The specific wording of "a minimum of 30%" was a result of David Tarnas seeking scientific advice from Dr. Jack Randall of Bishop Museum. Ms. Sara Peck of West Hawaii Sea Grant provided Mr. Tarnas and Dr. Randall with studies by Dr. James Bohnsack and the South Atlantic Fishery Management Council (NOAA/NMFS). With regard to Marine Fishery Reserves (MFR) it was recommended that "fishery reserves be established for 20% of the habitat while other traditional fishery management practices be applied to the other 80% of the habitat. Without adequate management in fished areas, we recommend that MRFs be increased to include **at least** (emphasis added) 30% of the shelf." This is where the "minimum of 30%" in HB3457/Act 306 originated. In faxed testimony in support of the Bill (March 23, 1998), Dr. Randall was clear on this point when he stated "Studies on coral reef management have shown that 30% is the minimum to set aside as reserves." Mr. Tarnas also made it clear to collectors that the language of the law specified that 30% was only a minimum and not a maximum.

Even though the language of the law was clear and had been written with the full knowledge of the collectors, the percentage aspect turned out to be a source of much rancor and discord. Repeatedly throughout the FRA designation process, aquarium collectors asserted that they "had been promised" only 30% FRAs and no more. When the site selection process included more than 30% they stated that they had been betrayed and exploited. They rallied behind this point to justify opposition to the FRA plan and non-participation in the process.

DAR hired me in February 1998 and one of my assignments was to actuate Act 306. In order to accomplish its mandates with substantive community input, a council approach was decided upon. As a starting point, Sara Peck (Sea Grant), Pete Hendricks (DAR), and I reviewed the list of people who had participated in the earlier West Hawaii Reef Fish Working Group. We attempted to put together a council that had broad geographic representation and adequately represented the various stakeholder, community and

user groups in West Hawaii. We felt strongly that the work, dialog and information from this earlier group would prove highly beneficial to the task at hand. A working document of Operational Practices & Procedures was developed to serve as a vehicle for decision making.

The **West Hawaii Fisheries Council** (WHFC-initially called the West Hawaii Fishery Management Council) was convened June 16, 1998. It consisted of 24 voting members and six ex-officio Agency representatives (DAR, DOBOR, DOCARE, Sea Grant, and the Governor's Office). There were four aquarium representatives (three collectors, one aquarium shop owner), three commercial dive tour operators (of whom two belonged to the LFC) and one Hotelier. The rest of the Council consisted of a variety of overlapping and not easily definable interests. There were commercial and recreational fishermen (at least ten), shoreline gatherers, recreational divers, a LFC representative and several community representatives. Two members had degrees in marine or fishery science. Forty percent of the council were Hawaiians, one being on the board of OHA. Seven of the 30 Council members were not on the WHRFWG but were added to expand expertise and/or representation.

Prior to the beginning of the Council's decision making process, I spent several months reviewing pertinent literature on marine protected areas, community-based resource management and scientific studies dealing with Hawaii's reefs and aquarium fish collecting in general. This information was distilled for the Council into several specific site selection criteria. As a group we discussed aspects of reserve design and function including minimum size, shape (e.g. single large or several small reserves?), location, enforceability and conflict reduction. References to the studies cited were available to any Council member upon request. Two outside scientists were also asked if they would participate in the workings of the Council. Both declined.

The importance of Council members conveying information during this process to their respective "constituents" was stressed repeatedly. It was emphasized that they represented not only themselves but also more importantly, a particular user group or community. In several instances community meetings were called by residents to request further information on the provisions of Act 306. The FRA decisions reached at these meetings were conveyed to the Council. Aquarium collectors attended none of the meetings although they were open to the public.

After site selection criteria were established each Council member was given a set of coastal maps. They were asked to gather information from their respective communities or user groups and then designate specific FRA locations on their maps. The designations on each map were then compiled on master maps of the coast so as to provide a clear graphical indication of the group's choices. Consensus on certain areas was readily apparent. The collectors were directed to additionally "indicate areas which they consider critical to their fishery." Only one of the four aquarium representatives returned their maps. Instead, the others provided only a single brief outline of their combined choices, the total of which did not meet a minimum of 30%. They provided no specific information at this time to the Council concerning areas they considered critical to their fishery. Nevertheless, the areas designated by the collectors showed a remarkable congruence with those ultimately selected by the Council as a whole.

From the outset of the selection process the Council was repeatedly tasked to keep the total FRA mileage as close to 30% as possible. This strategy was adopted, as it quickly

became apparent that there was considerable pressure from both within the Council and the public at large to close a significantly larger portion of the coast. It was made very clear to the Council that we were trying to successfully manage the fishery by ensuring sustainability and reducing conflict, and not trying to shut it down. One of the early complications in site selection was the result of previous work done with the Miloli'i and Ho'okena communities by Dr. Kimberly Lowe (DAR). As previously noted she had assisted these communities in the development of FMA proposals for their locales. These proposals specified a ban on aquarium collecting in a 33-mile zone in the vicinity of these communities. Of and by itself this zone exceeded 30% of the coastline, and this was before any additional FRAs were added. According to their Council representatives these communities felt as if these protected areas had been essentially "promised" by DAR. It took considerable time and effort by all parties to reach a compromise, which ultimately reduced these no collecting areas to slightly more than a third of what the communities had expected.

During the time of the WHRFWG and when the WHFC was first formed, there was little scientific information regarding the impact of aquarium collecting in Hawaii or elsewhere. This fact had been held up time and again by collectors throughout the years whenever there were calls for increased management. A 1974 attempt by Nolan and Taylor to investigate aquarium collecting impact was fraught with methodological problems and ultimately was not peer reviewed nor published in any scientific journal. As the initial results of the joint UHH/DAR aquarium reef fish study became available they were presented to the Council and reported in public lectures. Additionally, preliminary results of two other DAR studies, which examined changes in reef fish communities over 20-year periods, were also presented. All three of these studies indicated substantial effects on fish populations due to aquarium collecting.

The aquarium collectors on the Council responded to these findings by ceasing their active participation in the group. All attended the first two meetings (one by proxy), but subsequently their attendance became sporadic. They either failed to show up entirely or sent proxies whose presence often was not constructive. Absenteeism at Council meetings was not limited solely to the collectors and a number of members were dropped from the Council due to nonattendance in accord with the Operational Guidelines. Maintaining people's commitment to such a group has proven to be a difficult undertaking given the differences of interests and the often contentious and emotionally charged atmosphere of these decision-making meetings.

Nevertheless, the Council as a whole persevered and by consensus, vote and determination worked out a FRA plan, which is biologically sound, enforceable, and conflict resolving. Nine separate areas along the coast (see map) were selected comprising a total of 35.2% of the West Hawaii Coastline (including already protected areas).

During its deliberations, the WHFC added several provisions to the draft FRA Rule (HAR 13-60.3), in order to enhance enforceability and stabilize the fishery. These included two boundary changes, establishment of seaward boundaries at 600 ft., inclusion of GPS boundary coordinates, prohibition of aquarium collecting gear or collected animals within FRAs, an aquarium vessel registration/identification system, and a control date for possible future use in a limited entry program. These provisions were presented at the public hearing.

The public hearing on the FRA Rule was the largest ever conducted by DAR with at least 860 attendees. The plan received overwhelming support (93.5% of 876 testimonies) from a wide range of community sectors. Several months later the BLNR unanimously approved the Rule and all its provisions except for the prohibition on aquarium collecting gear within FRAs, which was inexplicably omitted.

The Attorney General's office then reviewed the Rule in preparation for the Governor's signature. A Deputy Attorney General issued an opinion that the added provisions to the Rule constituted "new proposals not covered by the prior public hearing which therefore cannot lawfully be adopted until they go through a public hearing process." DLNR and DAR questioned the soundness and validity of the opinion but decided to bring the Rule back to the BLNR for re-approval without the provisions objected to by the Deputy AG.

The amended Rule was approved shortly thereafter by the BLNR. One BLNR member noted the Deputy AG's opinion "defeats the whole purpose of public hearings. It could potentially lead to endless rounds of public hearings. I don't know if the (Deputy) AG opinion was well thought out."

On 17 December 1999 HAR 13-60.3 was signed by Governor Cayetano, and became effective 31 December 1999.

Research is currently underway by DAR and a consortium of University and Federal scientists to evaluate the effectiveness of these reserves and to better understand the ecological dynamics of our nearshore reef environment.