

PROTECTING SPAWNING AGGREGATIONS FROM THE LIVE REEF FISH TRADE

Annual Report to the Oak Foundation

Grant #OUSA-02-089

December 2003

INTRODUCTION

With the Oak Foundation's generous support, The Nature Conservancy completed the first year of our grant to protect spawning aggregations in Melanesia from destructive fishing and the live reef food fish trade. Our four specific grant objectives are to:

1. Increase community awareness about destructive fishing by conducting workshops in six communities, three in Papua New Guinea and three in the Solomon Islands.
2. Conduct spawning aggregation training for partners, and survey and monitor sites in Manus and New Ireland in Papua New Guinea, and in the Arnavon Islands in the Solomon Islands.
3. Document traditional knowledge of spawning aggregations and their management.
4. Integrate spawning aggregation management into the design of locally managed marine areas.

This grant is complemented by funding from a two-year grant from the United States Agency for International Development (USAID) which aims to improve resource management and spawning aggregation site protection in Melanesia, increase awareness of these resources' vulnerability to over-exploitation, and enhance capacity to manage fish spawning aggregations and marine protected areas.

MANAGEMENT ISSUES AND CHALLENGES

In the past year, the Conservancy's Marine Projects Officer for Papua New Guinea and the Solomon Islands, Paul Lokani, was promoted to a new position as our Melanesia Program Director. This was a very deserving appointment, and a reflection of Mr. Lokani's considerable abilities and energy. Unfortunately, it significantly limited the amount of time he could allocate to this project.

The Conservancy is working to identify and hire replacements for Mr. Lokani in Papua New Guinea and the Solomon Islands, but this process is moving slowly. As we noted in our six-month report, we identified a strong candidate for the Solomon Islands and offered him the job, but unfortunately he decided to accept an overseas position with another organization. We also tried reassigning one of our existing staff members to the Papua New Guinea project, but he lacked the necessary expertise. Our preference has been, and still is, to hire Melanesians to these positions. However, all of the potential local candidates that we have identified are currently working for other agencies and would need to be hired away from them, something that we are reluctant to do.

The Conservancy is currently reviewing a number of alternatives, including contracting an expatriate with extensive and relevant experience in Papua New Guinea and the Solomon Islands, seconding local candidates (as opposed to hiring them away from their agencies), temporarily reallocating Conservancy staff, subcontracting to other organizations, or a combination of these options. At the time of writing, our strongest option is to contract the expatriate, along with a number of targeted local contracts, due to the urgency to move the activities forward under this grant and the USAID grant. Given these staffing issues, the USAID grant has been extended by one year. However, we will continue moving forward with the activities under the Oak Foundation grant, and we expect to be able to complete all work as scheduled by the end of 2004.

MAJOR ACCOMPLISHMENTS IN THE LAST YEAR

Objective 1: Increase community awareness about destructive fishing by conducting workshops in six communities, three in PNG and three in the Solomon Islands

As noted in the six month report, we decided to delay our work to develop awareness materials and hold community workshops until we can complete an assessment of the effectiveness of the live reef food fish trade and destructive fishing materials from the previous Oak Foundation and USAID grants. With the lack of in-country staff, we are now estimating that this review will occur in the first quarter of 2004. In the meantime, we are noting the issues and information needs being raised in discussions with local NGOs, community groups, and fisheries agencies, and we will incorporate them into the materials production.

Objective 2: Conduct spawning aggregation training for partners, and survey and monitor sites in Manus and New Ireland in PNG, and in the Arnavon Islands in the Solomon Islands

This objective is on track and considerable progress has been made. The Conservancy contracted Dr. Kevin Rhodes, a specialist in reef fish spawning aggregations, to review all existing and relevant methodologies for assessing and monitoring spawning aggregations. Dr. Rhodes used this information to prepare a combined methods and training manual for in-country fisheries officers and conservationists.¹ The draft manual was used at a training workshop in Papua New Guinea, and was later updated based on internal and external feedback. The revised manual was then used for training in Palau under the USAID grant, and further amended after that workshop. We plan to use the third edition of the manual for training in the Solomon Islands in March 2004. The manual and training methods will continue to undergo review and revision during the life of the project to ensure we have the most up-to-date, effective, and practical manual possible. A draft version of the manual is available upon request.

Manual Development

Some key issues that we encountered in the last year related to obtaining agreement on what methods should be included in the training manual, especially given that the target audience is

¹ Introduction to Monitoring and Management of Spawning Aggregations and Aggregation Sites for Three Indo-Pacific Grouper Species: *Epinephelus fuscoguttatus*; *Epinephelus polyphekadion*; and *Plectropomus areolatus*. A Manual for Field Practitioners. Indo-Pacific Draft Field Manual. The Nature Conservancy, June 2003. 61 pp.

in-country practitioners rather than scientists. To date, most spawning aggregation monitoring methodologies have been based on the assumption that trained scientists will be conducting the monitoring. However, in the Pacific, and especially in Melanesia, this assumption is not always valid.

To address the needs of local practitioners, the Conservancy has attempted to make the monitoring methodologies as practical as possible and to ensure that they are related to management questions. Our goal is to develop a monitoring program that can be undertaken by in-country fisheries officers and conservationists, with results that can be immediately interpreted and used by managers to obtain a basic understanding of what is happening to a specific aggregation in relation to their management actions. In the manual and training workshops, we recommend that managers consult qualified scientists whenever possible to build on the basic methods and data and to gain a more detailed understanding of what is occurring at spawning aggregation sites.

The Conservancy's approach has resulted in some criticism from other scientists, in particular from the Society for the Conservation of Reef Fish Aggregations (SCRFA), who have tended to focus more on the scientific level of assessments and monitoring. We have engaged in an ongoing dialogue with the SCRFA Board and Director, and they are now more comfortable with the Conservancy's methodology. Even within the Conservancy, we continue to have debates over questions such as whether or not to include visual length-frequency training, as well as other issues. This lively debate on methodologies, both within and outside the Conservancy, has been exciting and is helping considerably in refining the methodologies and the training.

Based on this debate and on the trainees' suggestions, the Conservancy is continually modifying our methods and training manual. The January 2003 release by SCRFA of their own manual, which reviews reef fish spawning aggregation study methods with a scientific focus, has helped considerably.² This is a very useful and complementary document to our manual, and one that we give to all workshop participants. We expect our manual to undergo a number of reviews over the next year as the subject of reef fish spawning aggregation assessment, monitoring, and management advances.

Training Workshops

In April, the Conservancy held a reef fish spawning aggregation training workshop in Papua New Guinea at Kavieng in New Ireland Province. Fifteen participants attended the workshop from a range of organizations, including the National Fisheries Authority, the Department of Environmental Conservation, the University of Papua New Guinea and James Cook University, the Worldwide Fund for Nature (WWF), the Wildlife Conservation Society, Conservation International, the Packard Foundation, and two local NGOs. A complete workshop report, which includes the details of the workshop activities and results, is attached.

The feedback from the Papua New Guinea workshop greatly assisted us in refining the manual and improving our training methodologies. The workshop also led to management recommendations for the Kavieng spawning aggregation site based on observations made during

²Colin, P. L., Sadovy, Y. J. and Domeier, M. L. 2003. Manual for the Study and Conservation of Reef Fish Spawning Aggregations. Society for the Conservation of Reef Fish Aggregations Special Publication No. 1 (Version 1.0), pp. 1-98+iii.

the training. This site was targeted in the past by the live reef fish trade, and it still shows very serious signs of over-fishing. We provided the management recommendations to the relevant authorities and made personal briefings to the Governor of New Ireland and the principal and senior staff at the National Fisheries College in Kavieng.

The workshop also included two international exchanges which will help spread the standardization of spawning aggregation monitoring methodologies. The Wildlife Conservation Society requested that one of their staff, Lorraini Sivo, participate in the workshop as part of its preparation to investigate reef fish spawning aggregation protection in Fiji. In addition, WWF-Solomon Islands requested that their reef fish spawning aggregation officer, Alec Hugh, participate to learn the latest monitoring methods. Mr. Hugh will also be our contact for an upcoming Solomon Islands training workshop, which will be held next March in collaboration with WWF.

The Conservancy shot digital video footage of the Papua New Guinea workshop and the Palau workshop and took underwater footage of the spawning aggregations at both sites. The underwater footage was used during the workshops to assist the participants with learning species identification and fish behavior. During the last few days of the Palau workshop, we used the footage to produce a rough-cut 20-minute training video, which proved to be a very effective training tool. We are now working to produce a higher-quality training video from all of the aggregation footage. As more underwater footage is obtained, the training video will be modified and expanded.

This project has resulted in the production of a set of practical protocols for reef fish spawning aggregation sites, with an emphasis on the key fish species targeted by the live reef food fish trade. While there is not yet universal agreement on the methods and training, the feedback from the workshop participants has been extremely positive. The Kavieng workshop was held towards the end of the spawning season, so additional follow-up technical support will be provided to ensure that monitoring by local groups commences in the coming spawning season in early 2004.

Objective 3: Document traditional knowledge of spawning aggregations and their management

This activity was delayed due to difficulties in identifying and hiring appropriately qualified local staff in Papua New Guinea and the Solomon Islands. Our plan was to contract local consultants to document the traditional knowledge of spawning aggregations and marine management practices in Kavieng and Manus in Papua New Guinea and in Choiseul in the Solomon Islands. However, we wanted to ensure that our local staff were involved in the field work before beginning this activity in order to ensure continuity in dealing with the communities.

Given the urgency to move ahead with the activities under this objective, we are in the process of contracting an expatriate who grew up in both Papua New Guinea and the Solomon Islands, completed his Ph.D. in the Solomon Islands on spawning aggregations, and has done a considerable amount of community-based work, including management and documentation of

traditional fisheries knowledge. This contractor will work very closely with the Conservancy's in-county staff and local consultants in the next year to begin documenting traditional knowledge. In the meantime, the Conservancy will work to identify appropriate local candidates who can take over the work from the contractor.

Objective 4: Integrate spawning aggregation management into the design of locally managed marine areas

This objective will be strongly guided by the results of Objective 3, so we expect to be able to make good progress from mid-2004. The ongoing process of developing the monitoring and training manual has sparked considerable discussion and debate about how to interpret and use the information for spawning aggregation management. Correspondence and notes on this discussion are being recorded, and will be combined with information about traditional knowledge of spawning aggregations to guide the development of management criteria for locally managed marine areas. We expect that this objective will move forward very quickly once we have identified and hired the appropriate staff to fill in existing gaps.

FINANCIAL REPORT

The Oak Foundation's first grant payment of \$39,578 provided critical support for the Conservancy's work to protect spawning aggregations in Melanesia this year. A complete breakdown of our project expenses for the grant period is given in the attached financial reporting form. Oak Foundation funding was matched by additional funding for spawning aggregation protection work from USAID and the David and Lucile Packard Foundation.

CONCLUSION

Despite the delays that we encountered this year, the Conservancy made considerable progress toward our second grant objective, and we believe that we are on track to achieve all of our goals by the end of the grant period. We expect that the pace of our work will increase significantly in early 2004 when we hire a contractor to document traditional knowledge of spawning aggregations, and we will continue our search for local candidates to fill empty staff positions in order to ensure the long-term sustainability of the project. The Conservancy is grateful for Oak Foundation's continued support of our work to protect spawning aggregation sites in Melanesia, and we look forward to keeping you updated on our progress in the year to come. Once again, thank you for giving us this opportunity to join forces with the Oak Foundation to protect some of the world's most diverse and imperiled marine environments.

OAK FOUNDATION—FORM I

NARRATIVE AND FINANCIAL REPORTING FORM FOR ANNUAL AND END-OF-GRANT REPORTS

The Nature Conservancy's Annual Report is attached. Our financial statements can be found on page 20 of the report.

Section A — All grant recipients must complete this section

A-1 Project title: Protecting Spawning Aggregations from the Live Reef Fish Trade

A-2 Oak grant number and date of grant letter: OUSA-02-089
November 28, 2002

A-3 Organisation name and address: The Nature Conservancy
Asia-Pacific Country Programs
4245 N. Fairfax Drive
Arlington, VA 22203

A-4 Date of this report and period covered: December 4, 2003
December 2002-December 2003

A-5 Contact person responsible for this grant: Name: Dr. Andrew Smith
Phone: 680-488-2017 Fax: 680-488-4550
Email: andrew_smith@tnc.org

A-6 Briefly list the goals and objectives described in your original grant request.

5. Increase community awareness about destructive fishing by conducting workshops in six communities, three in PNG and three in the Solomon Islands.
6. Conduct spawning aggregation training for partners, and survey and monitor sites in Manus and New Ireland in PNG, and in the Arnavon Islands in the Solomon Islands.
7. Document traditional knowledge of spawning aggregations and their management.
8. Integrate spawning aggregation management into the design of locally managed marine areas.

A-7 Describe the grant objectives that have been achieved, either in whole or in part.

The Conservancy made strong progress on Objective 2, preparing a combined methods and training manual for in-country fisheries officers and conservationists that is being continually updated based on internal and external feedback. In April, we held the project's first reef fish spawning aggregation training workshop in Papua New Guinea at Kavieng in New Ireland Province and developed a rough-cut training video. The project has resulted in the production of a set of practical protocols for reef fish spawning aggregation sites, with an emphasis on the key fish species targeted by the live reef food fish trade.

A-8 Describe the grant objectives that have not yet been met.

Although we made strong progress on Objective 2, the other objectives were delayed due to difficulties in hiring new staff to replace our Marine Projects Officer. We are continuing to look for local candidates for the job, but we plan to hire a contractor in the interim to ensure that the work will continue. Despite these delays, we were able to move forward with planning and coordination for these components, and we expect to be on track to complete all project activities by the end of the grant period.

A-9 What steps are being taken to ensure the sustainability of your project and organization beyond the grant period?

We are working closely with a wide range of partners, including representatives from the government, universities, and local and international NGOs, in order to build in-country capacity to carry out this work in the long-term. In addition, we are trying to hire local project staff wherever possible to ensure buy-in and support at the community level. We are also carefully documenting and sharing the results of the project at all stages with a wide range of stakeholders.

A-10 If your project involves collaboration with other organizations, please comment on the impact of that collaboration.

This project involves strong collaboration with other conservation groups working in Papua New Guinea and the Solomon Islands. This collaboration has resulted in lively debates about training methodologies and continual refinement of our manual and training process. In addition, the participation of a wide range of organizations in our training workshops has spread the impact of the training beyond Melanesia to Palau and Fiji.

A-11 Who else has funded this project and at what amount? If the total proposed budget for the project was not raised, indicate if the project goals were altered in any way.

Partial funding for the project this year came from the United States Agency for International Development (\$250,000). In addition, the David and Lucile Packard Foundation provided funding (\$44,000) for the Palau training workshop which complemented work conducted under this grant.

A-12 Have all previously paid Oak grant funds been used? If not, when will they be fully expended?

Yes.

Section B – If you are requesting a subsequent payment under your grant agreement please complete this section

Date of last Oak grant payment: December 16, 2002

For the coming year / period, are you requesting any change in the Oak Foundation contribution requested in the original grant negotiations? If yes, please supply a revised budget with the Oak allocation for the coming grant year / period. No

Current amount of funds being requested from Oak: **Currency:** US\$
Amount: \$40,422

Period for which funds are being requested: (mo/yr to mo/yr) December 2003-November 2004

Bank wiring instructions for next payment:

Name of account: The Nature Conservancy
Account number: 004112981822
Bank name: Bank of America
Bank address: 1111 E. Main St
Richmond, VA

Bank Routing No., Sort Code, Swift reference, etc. (for bank wiring instructions): 026009593

We confirm that there has been no change in charitable status of our organisation since the previous grant payment by Oak as defined under the relevant laws of the country in which our organisation is incorporated: Yes

(If the answer to the above is “No” please enclose a copy of the relevant documentation confirming the status of your organisation.)

Section C – All grant recipients must sign this form

C-1 Signature of person responsible for this grant:

Andrew Smith 12/4/03
Signature Date