Pearl Cultivation in the South Seas

*A dedication to the memory of William Saville Kent**

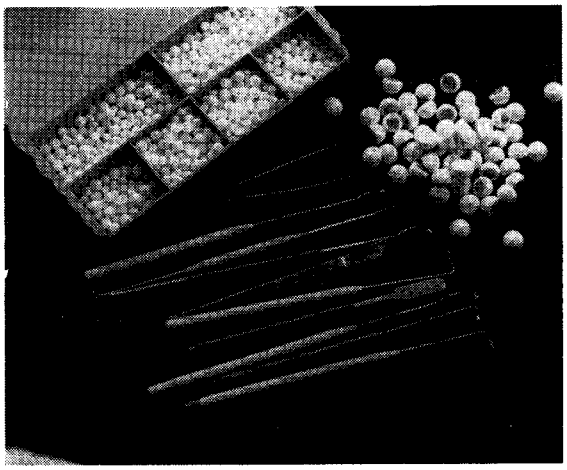
By C. Denis George**

About 1880, a frail scientist was roaming the shores and islands of northern Australia and the South Pacific, observing, studying, and collecting a multitude of various marine specimens, many of them previously unrecorded.

He would set up his camera on top of a small pool and untiringly photograph the marine species in their natural element. Later, after many thousands of photographs, drawings and notes—which had taken him from Shark's Bay and Broome on the western coast of Australia, to Thursday Island in the Torres Strait, along the Barrier Reef to the Suwarrow Lagoon in the northern Cook Islands, and to many other places in the Pacific—and after many years of research and study, in 1893 he eventually had published a most impressive book—The Great Barrier Reef of Australia, *which today is a text book on marine science.*

His name was William Saville Kent, and on page 258 of his book there is an illustration of pearls which he produced by transplanting mother-of-pearl shell from Thursday Island to Suwarrow Lagoon.

Had Kent's contemporaries realized the importance of this achievement and followed up these first magnificent results, the cultivated pearl industry would long since have been established throughout the South Pacific—with a resultant improvement in economic conditions by providing much-needed employment as well as foreign exchange.



The container holds nuclei for the production of spherical pearls. Also in the picture are half pearls and instruments used in the operation for spherical pearls.

Post-war Developments in the South Seas†

THE EARLY development of cultivated pearls in the South Seas is dominated by the pioneering work and successes of William Saville Kent, which pre-dates that of any of the early Japanese pioneers—including K. Mikimoto.[29] However, a remarkable development took place after the Second World War, particularly in Australia—but not as a continuation of the work of William Saville Kent.

In 1957, Dr D. J. Tranter, of the CSIRO, working at the Pearl Shell Investigation Laboratory on Thursday Island, succeeded in producing—for the first time in latter days—experimental spherical pearls, using the Australian species *Pinctada maxima*.[3]

This success was based on several factors: the declaration as war reparation to Australia of the pearl culture industry of Japan; the decision made by the Hon. E. M. Hanlon, then Premier of Queensland, to establish the pearl industry for Australians; the implementation of *Economic Report No. 1*, by Dr H. C. Coombs;[1] and investigations made by the Australian scientific and technical mission to Japan.[2]

In 1957-58, the author succeeded in producing the first large-size half pearls —up to 25mm—grown by a present-day Australian.[4, 5, and 6] At the same time, the Fisheries Bureau of Polynesia became interested in the prospects for cultivated pearls. This interest was followed up by the establishment of a pearl farm at Bora Bora, and early in 1964, with finance provided by FIDES, a Japanese technician from Thursday Island operated on a number of the local black-lip shell, eventually resulting in the harvesting of spherical pearls.

During 1964-65, following the expansion of Japanese pearl interests in the South Seas, pearl farms were established in Fiji and at Port Moresby. A remarkable upsurge in the study of pearl shells and environmental conditions was carried on by many scientists.[7 to 16]

Developments in Australia

Meanwhile, during 1957 the first joint Japanese, Australian, and American pearl farm was established in Western Australia, heralding the arrival of more Japanese companies in 1960-61. Australia, despite its earlier refusal to the entry of Japanese, provided the most favourable opportunities for the expansion of the Japanese industry. Divers and pearling boats were readily available and there were abundant resources of M.O.P. shell, as well as excellent locations for pearl farms. Politi-

* William Saville Kent, F.L.S., F.Z.S., F.I.Inst., ex-Commissioner of Fisheries for the Governments of Queensland, Western Australia, and Tasmania.

** Australian pearl farmer and consultant in pearl cultivation, Samarai, Papua and New Guinea.

† Developments by Japanese and others at Palau, Celebes, Burma, Philippines, Korea, and Hong Kong, etc., both before and after the Second World War, are not examined.

cal, economical, and ecological conditions were most suitable—especially the absence of Government regulations and controls.

Neither the work of Dr D. J. Tranter nor of the author had been properly evaluated in 1961, when, due to the decline of the pearl shell industry, the Government decided to close the Pearl Shell Investigation Laboratory at Thursday Island. The development of the cultivated pearl industry was thus left to private enterprise in conjunction with the Japanese.

At this period a situation existed where there were two groups with opposing principles: group A, which aimed at establishing the pearl industry in co-operation with the Japanese, and on their terms; and group B, which maintained that the industry must be established by and for Australians.

Group A, representing a large number of powerful Japanese, American, English, Australian, and Chinese financial interests, over the following years dominated Australia's natural resources of pearl shell, utilizing for their production purposes more than one million M.O.P. shells yearly, in 16 pearl farms, operated by six combines. The value of their present annual production is estimated on the open market at above $30 million.

Papuan student, Joe Jellico, from the Milne Bay area of Bonarua Island, operating half pearls whilst Anton Stephen of Normanby Island watches.

It should be noted that whilst the Japanese Government does not permit capital investment in overseas pearl cultivation ventures, it does extend technical co-operation; by so doing, Japan is able to safeguard its technical secrets. Japanese and Chinese interests enter into private agreements of technical co-operation with Australian, American, and English financial interests, whereby the former provide the technical requirements, and the latter supply the finance. The agreements entered into[17] are all basically the same, and provide essentially that—

(a) The technique shall remain the secret of the Japanese.

(b) All pearls produced shall be exported to Japan for marketing.

(c) Production objectives shall be regulated by the Japanese Fisheries Agency.

(d) The size of pearls produced be limited so as not to compete with the Japanese home pearl industry.

Following further representations by Japanese pearl culture companies and Government officials,[18] and after suitably planned publicity, nearly 100 per cent of Australia's natural resources of M.O.P. shell and production of pearls came under Japanese control. The industry is thus in reality administered under the Acts of the Japanese Aquatic Legislation, in accordance with the Marine Products Promotion Act.[19 and 20] Australians provide—capital, services, establishment facilities, labour, and all production materials. The Japanese provide—technical material used in the nuclei insertions, technicians, and management, as well as controlling the processing and sale of the pearls produced.[21] The proceeds of the pearl sales are divided equally, but whereas the Japanese share is mostly profit, the Australian partner must provide for all production and other expenses, as well as paying the normal company tax. Final dividends, if any, are liable to personal taxation. The Japanese profits are not subject to Australian taxation.

It is understood that some of the Australian interests are not too well off: a Directors' Report for Australasian Pearlers Ltd., of Melbourne, deposited with the Victorian Companies Office (18 January 1968), disclosed a loss of $A57,468, which brought their accumulated losses to $A326,137. It was also stated by the directors that they had applied to their Japanese partner for a loan of $A50,000 for current production expenses (FINANCIAL REVIEW, 19 January 1968).

Training of Australians in Pearl Cultivation Techniques

The training of Australians in pearl cultivation is an important factor in economic development; and as a point of national prestige it has been debated in practically all Australian Parliaments. On 26 August 1965, the then Queensland Treasurer, the Hon. T. Hiley, in reply to a question regarding Japanese obligations to train Australian personnel, told Parliament:

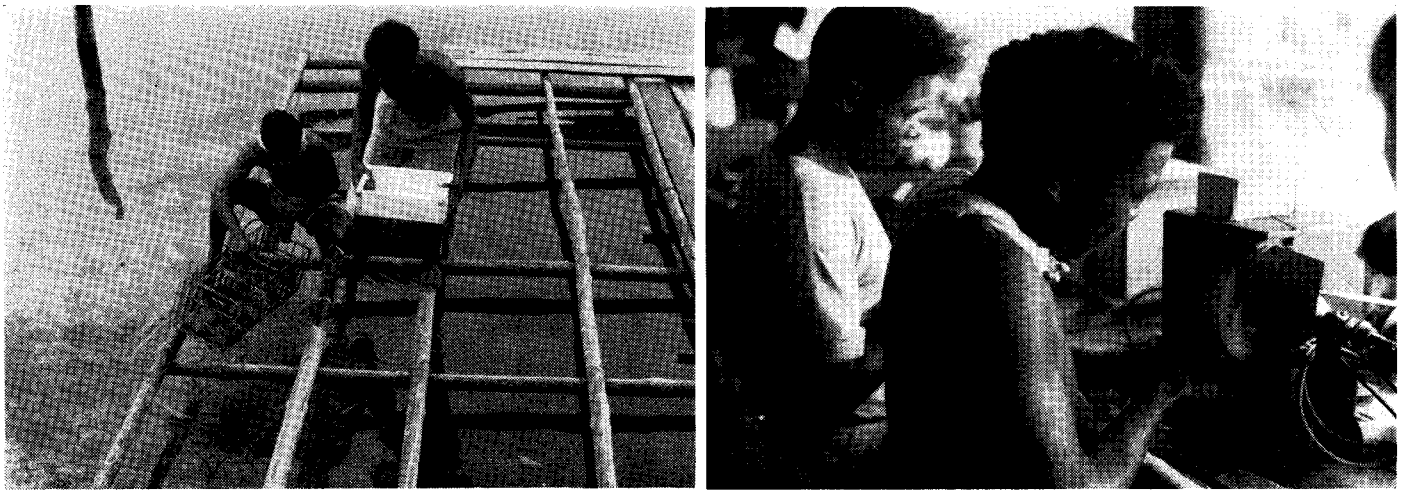
> Whilst the fundamental techniques of nucleus insertion operations are no secret to Australian technicians, they remain a specialist task and the Japanese operatives are, in the main, university graduates or of similar academic achievements. It is regrettable to date that candidates for instruction with the necessary educational background and qualifications have not been forthcoming to test the availability of this tuition *(Queensland Hansard)*.

This statement is flatly contradicted by the first clause of the compulsory agreement. The fact that not a single Australian has so far been trained as a technician, or in the nuclei insertion, indicates strict adherence to the Japanese directives.

While the required academic qualifications would be desirable for chief technicians and scientists in charge of research, practical experience in the field coupled with adequate ability is sufficient. Most of the male operatives on the pearl farms in Japan and in overseas' ventures are village boys who have been suitably trained. Most of them have had only basic school education—the actual pearl insertion technique is simple and can be learned by anyone who possesses normal intelligence and ability. The author is currently training Papuan boys of Grade Four educational standard.

Developments by Australians

The second group, group B, which was endeavouring to establish the pearl industry for Australia, was represented by the Greek-born author who had originally started private research on pearls in 1950. By 1957 he had established the Packe Island Pearl Experimental Station[4 and 5] near Thursday Island. By using methods and tech-



Left—Selecting pearl shells for operating. Papuan students, Andrew Mwaiyale, of Normanby Island, and Mick Mark, of Logea Island, are occupied with an early phase of the half-pearl processing operation.

niques which he had developed he produced a considerable number of large-size half pearls.[6] The author gratefully acknowledges the assistance and suggestions received from Dr D. J. Tranter at that time.

Proposals for ventures of technical co-operation from a number of Japanese pearl companies were subsequently rejected on the grounds that they restricted the participation of Australians and were of limited benefit.[22]

During 1961 the author assisted technically with the establishment of a new Australian group: the Giralia Syndicate, at Exmouth Gulf, Western Australia.[23] Within a record period of five months the first large spherical pearls were inserted and subsequently harvested. These are believed to be the first large round pearls produced on production lines by non-Japanese in the Indo-Pacific. This success, however, was not followed up. After training one member of the syndicate as a technician, the association ended. The syndicate is currently producing only half pearls.

During 1962-63 the author, in partnership, established a pearl farm at Thursday Island.[24] In the midst of five Japanese-controlled companies he achieved large production of excellent quality half pearls. Because of pressure and some allegedly unfair practices he was finally obliged to abandon his pearl farm and assets.

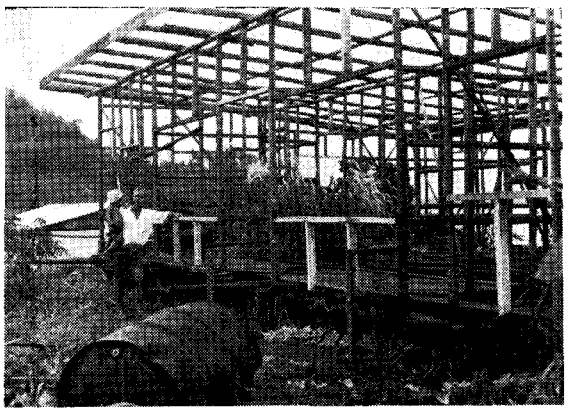
In 1964-65 the author technically assisted a second Australian group wishing to enter the industry: Messrs Brown, of King Sound, Western Australia, who went into production of half pearls. He also introduced to the industry, for marketing purposes, the Sydney jewellery firm of Angus & Coote Pty. Ltd., and trained some of their personnel in the technique of processing half pearls to the export stage. The first all-Australian production, processing, and exporting was thus achieved.[25 and 26] The initial success of marketing direct to New York was an important achievement in that it broke through the well-organized marketing monopoly of the Japanese. On the satisfactory completion of the agreement the author left Australia to undertake duties as consultant to Indo-Pacific governments and private companies interested in the development of the pearl industry. Currently, the processing of half pearls in Australia has been discontinued, although, Messrs Brown are still in operation.

The wish of Australians to participate technically in the pearl industry continues and, in October 1967, a Churchill Fellowship was awarded to Mr Vernon Wells, of Canberra, enabling him to study pearl culture in Japan and the Philippines.

The desire to establish an Australian pearl industry has received support from many quarters, including the press. Among many publications, one very factual article, by Larry Foley: *The Great Pearl Sell-out* (INTERNATIONAL NEWS REVIEW, 11 June 1965) promoted much interest, and the television documentary: *North of Capricorn*, from the 'Project 65' series, created a sensation by uncovering intimate details of the profitability of the industry. A technical paper[29] written by the author and published in the AUSTRALIAN GEMOLOGIST†† was republished in the LAPIDARY JOURNAL OF AMERICA and sections of it were republished in Europe; it was received appreciatively by both trade and scientific authorities. For the first time, aspects of the pearl industry were presented without bias in their true perspective.

†† Reprints available from the author.

The author instructs a Papuan student in the half-pearl operation.



The incomplete dormitory for students at the 'John Guise School of Pearl Culture.'

The Australian National Museum, in Sydney, has an exhibit of the author's early work. It includes instruments which were used, some of the pearls produced, and other details of early research and development.

The Samarai Pearl Farm

In October 1966, the author and his family migrated to the Territory of Papua and New Guinea to establish a new pearl farm near Samarai. By the end of 1967 the first half pearls had been harvested and after being processed on the farm, were exported direct to the French market. The quality, stability, and workmanship of the product was very well received by the pearl-conscious Parisian buyers. The prices obtained were $US11 for small sizes, and $US15 for larger sizes. These are very attractive prices when one realizes that from two to five pearls can be produced in an M.O.P. shell—and in a cultivation period of less than one year.

Orders received from many countries assure a prosperous future, whilst international buyers have indicated their interest in buying pearls of South Sea quality direct from the producers.

The desire to establish pearl cultivation as a national industry in Papua was eloquently expressed by the Hon. John Guise, M.H.A., in a speech in the House of Assembly (5 September 1967)—

> What I want to seek is an assurance that the small man promoting the pearl industry must be welcomed and protected. *(Referring to the activities of a Japanese technical co-operation project at Port Moresby, he continued)*—
>
> I say again, Sir, that I welcome this pearl culture venture in Papua and New Guinea, but as an elected member I have a responsibility, like all other elected members, to insist that our local people who work here must be taught all the technical know-how of the profession of this pearl culture in the country. Ultimately our country could be exporting pearls. It could be a valuable industry which could build up the economy of this country. I venture to suggest that the Australian pearls which are now being cultivated in Australia have to go to a clearing house outside Australia and are then brought back and sold again to Australians. This is not right. There is something wrong somewhere. These resources belong to Australia and Australia should control this, just as much as the pearls in this country must be controlled by this House of Assembly of Papua and New Guinea.[27]

Today, on the little island east of Samarai, which has been renamed Pearl Island, there is an efficiently organized pearl farm which has been built with the co-operation of the nearby people of Sariba and other islands; native materials have been used as far as possible. The pearl farm includes two residences, a store, an operating room, cultivating rafts, water tanks, a jetty, and a coal-tar boiler. There is a 15-foot dinghy with two 6 hp outboard motors which is used for all transport, as a diving boat and as a shell carrier. All instruments, chemicals, and nuclei necessary for the technical operation are on hand, and there is a well-equipped pearl-processing factory with semi-automatic machinery which includes machinery for the manufacture of pearl-shell buttons as a by-product. On the scientific front there is a small field research laboratory for studies related to the production of pearls, and a most comprehensive technical and scientific library which is of great value and believed to be the best available in the Indo-Pacific.

It is further aimed to establish a Tropical Marine Research Laboratory as a field research station of the Biology Department of the University of Papua and New Guinea, for practical research into pearl cultivation and other marine developments.

The *John Guise School of Pearl Culture*, named in appreciation of his moral support and encouragment, has been tentatively established for the training of the local people in the techniques of pearl culture and current diving methods. Through financial limitations it has, unfortunately, been necessary to reduce the number of students. A dormitory has been partly erected, and the Bwana Bwana Local Government Council has approved the purchase of roofing iron, but further materials are required for its completion and essential furnishings.

In the production field the technical results so far achieved are both satisfactory and original. Half pearls of excellent quality have been produced from the three major species of pearl shell found in the South Pacific: *Pinctada maxima*, *Pinctada margaritifera*, and the *Pteria pinguin*.

The Papua New Guinea Development Bank has recently given consideration to the development aspect of the project and has approved a loan.

Conditions of the South Pacific

The conditions which the author found in the Milne Bay District of Papua, and which tempted him to establish his pearl farm, are very similar to those which apply in practically every country of the South Pacific. However, the people of the area are dependent on copra and limited cash crops for an income; there is a lack of industry and—as a result—unemployment.

Technical training (apart from some good work done by the Missions) is almost totally lacking. Living conditions are retarded, annual incomes small, and the goods offered by the trade stores are expensive—and all this in an area where the environmental conditions are ideally suited for the development of pearl farms,[28] at a fraction of the normal cost.

The establishment and initial operations of an Australian pearl farm run with Japanese technical co-operation generally require a capital of about $A500,000—some ventures have spent that amount for land establishment alone. Such an investment is completely out of the question when one considers South Pacific island communities which might wish to begin production of pearls on Japanese terms.

If we examine the benefits which the people of Thursday Island and the Torres Strait have received since the establishment of the pearl industry there seven or eight years ago, we find that the results are practically negative. Any profits go overseas or to southern Australian companies.

There is serious unemployment; not one of the 900 children attending Thursday Island schools annually will be offered a technical future in the industry or receive employment other than as labourers. These youngsters are being denied favourable opportunities, and they must either revert to their village conditions or seek employment

on the mainland. Thus the Torres Strait islanders are seeing their chances of future prosperity slipping away, while the annual production value of at least $A15 million is earned from the pearls produced on nine farms which are operated by five groups at Thursday Island today. Corresponding situations exist in all other countries where similar ventures operate.

In the author's opinion the greatest benefit from the pearl industry will only be attained by the people of the South Pacific when they play an active part in the industry's development; this is possible if their part is based on the existing system of co-operatives and similar organizations, and by utilizing local materials and resources.

A little extra capital would be required for the provision of specialized materials, the training of technicians, travelling expenses of organizers, and research into local conditions which will vary from place to place. Many of the co-operatives in the South Pacific are studying avenues of possible development, but these are frequently not feasible because shareholders cannot afford the added capital outlay.

Knowledge of the pearl industry and its specialized requirements is today available in the South Pacific; natural resources can be found almost anywhere, and many of the boys and girls of the region could be trained both as efficient technicians and for the multitude of other jobs which the operation of the industry requires.

Prospects of the Pearl Industry

In recent months some alarming news has come from Japan, and elsewhere, which indicates that the Japanese industry is facing a problem of recession. Japanese trade circles appear to blame—the mini-skirt, the Vietnam war, changing fashions, the hot summer, and enforcement of lower prices by overseas importers: everything, in fact, but the real cause.

What has actually happened?

Because the demand for pearls has increased continuously over the past twenty years, the Japanese launched a programme of intensive over-production. This has resulted in the deterioration of their cultivating grounds by the creation of abnormal parasitic growth and many related maladies. These have detrimentally affected the physiology of the pearl shell, with a consequent fall in the quality of the pearls produced.[32 to 35]

The direct cause of the crisis is that, despite some improvement of quality by chemical and artificial means, during the last six or seven years the quality of the pearls offered by the Japanese market has been falling. The pearls are also of thin deposition. For some time the international market has been demanding pearls of better quality, and is refusing to handle the inferior product.

During March 1967, an international conference organized by JETRO*† and the Japanese Pearl Exporters Association, was held in Tokyo to discuss with the principal pearl buyers from twenty countries, the problem of improving the quality of the pearls offered and the promotion of the falling exports.

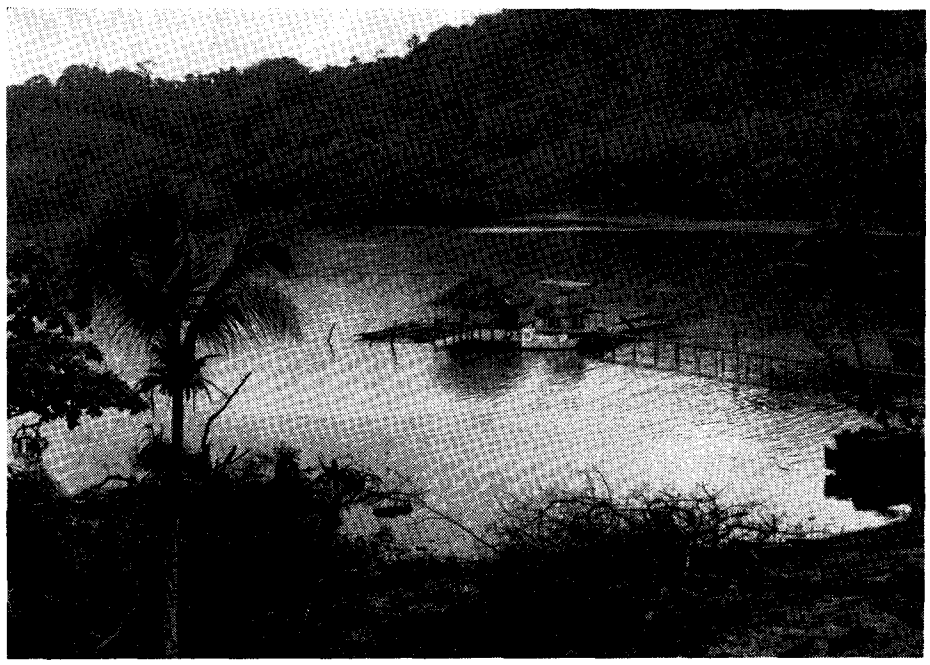
This fall in quality was not unexpected. In 1960, during his investigations in Japan, the author observed signs of deterioration in the cultivating grounds, and also the fact that scientists as well as the authorities were undertaking measures aimed at their recovery. Unfortunately, the situation now appears to be most complicated, and it is doubtful if the recovery of the grounds will be achieved.

It is of interest to note that similar deteriorating conditions have lately occurred on the leases which are operated with Japanese technical co-operation at Thursday Island and at Port Moresby. One of the ventures operating at Port Moresby—Pearls Pty. Ltd.—announced a few months ago that their shell beds were infested with worms and that pearl production was being reduced. It is understood that the mortality rate is very high and that scientists specializing in the eradication of the malady have arrived from Japan. It is known that one of the methods applied for the eradication of worms necessitates the immersion of the shell in saturated salt water for an extended period.[30 and 31] Another method provides for the insertion of the shell into a special plastic envelope for protection.

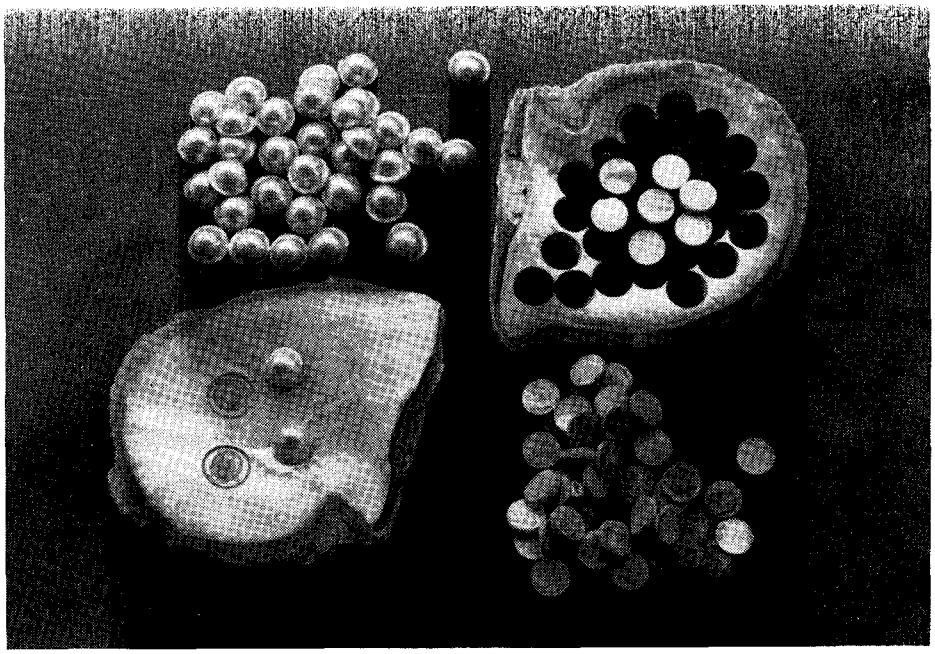
An alarming aspect of the situation is that whilst it took over twenty years for the Japanese grounds to deteriorate, the infestation of the Australian grounds has occurred within five or six years.

The international market is refusing to handle pearls of inferior quality, but is also demanding large-size pearls of good quality, at logical prices. Today, the demand for pearls is greater than ever. This demand cannot be supplied by the Japanese, not only because of the fall in the quality of their product, but owing also to the limitation of size imposed by the smallness of the Japanese native pearl shell.

†Japan External Trade Organization.



The operating laboratory is constructed from locally produced materials. The production raft is attached.



Bottom left—Pinctada maxima—**showing extracted half pearls. Top left—Unprocessed half pearls. Top and bottom right—Pearl shell which is used for the manufacture of pearl shell buttons as a by-product.**

The Indo-Pacific region has abundant deposits of the three major species of pearl shell utilized for pearl production; in addition, there is a shell similar to that of the Japanese but growing to a much larger size—*Pinctada vulgaris* and varieties.

Utilizing the four available species and with the current techniques it is possible to produce three kinds of spherical pearls, together with three kinds of half pearls. These cover the entire range of quality, size, and colour which today's market demands.

Because of low establishment and operating expenses the author suggests that pearls of South Sea quality could be offered to buyers and public alike at attractive prices, to the mutual benefit of all, and to a value of at least $US100 million.

It is his belief, too, that, in time, the pearl industry will be established in their area by the Indo-Pacific people as an integral part of their economy—thus justifying the research and dreams of its great originator, William Saville Kent, who died in 1909, on his pearl farm at Albany Pass, Thursday Island.

Acknowledgments

The author gratefully acknowledges the suggestions and advice given by his wife, Mrs Yurie George, and the correction and typing of the manuscript by Mr Charles Shann.

References

1. Coombs, H. C. (1946): Economic Report, No. 1. *Pearl Shell, Bêche-de-mer* and *Trochus Industry of Northern Australia*, Commonwealth Fisheries Office, Canberra.
2. Craig, L. T. (1947): *Report of the Japanese Pearl Industry*, Department of Commerce and Agriculture, Melbourne (not published).
3. Tranter, D. J.: *Technique of Pearl Culture*, Australian Fisheries Newsletter, September 1957.
4. *Experiment at Packe Island*, The Ahepan, April 1958, Brisbane.
5. *Pearling Experiment*, Torres News (20 January 1959), Thursday Island.
6. *The Oyster is his World*, Sun-Herald (2 February 1959), Sydney.
7. Tranter, D. J. (1958): *Reproduction in Australian Pearl Oysters*, Aust.J.Mar. Freshw.Res. 9:135-43; 144-58; 191-216; 509-25.
8. Hynd, J. S. (1954): *A Revision of the Australian Pearl Shells, genus Pinctada*, Aust.J.Mar.Fresw.Res. 6:98-137.

9a. Hynd, J. S. (1960): *An Analysis of Variation in Australian Specimens of* Pinctada albina, Aust.J.Fresw.Res. Vol. II:326-364.

9b. Hynd, J. S. (1960): *Report to the SPC on an Investigation of the Black Lip Mother of Pearl Oysters in Manihiki, Cook Islands.*

10. Wells, Vernon: *Surveying Australian Pearling Beds*, 1958, Dept. Primary Industry, Canberra.
11. Ranson, Gilbert: *Rehabilitation of Pearl Oyster Beds in French Oceania*, SPC Quarterly Bulletin, July 1955.
12. Gug, Michel: *M.O.P. Industry in French Oceania*, SPC Quarterly Bulletin, July 1955.
13. Domard, J.: *Diving for Pearl Shells in French Polynesia*, SPC Quarterly Bulletin, October 1959.
14. Powell, R.: *Pearl Shell Transfer in the Cook Islands*, SPC Quarterly Bulletin, January 1957.
15. Noakes, J. L.: *Pearl Shell Investigation in The Cook Islands*, SPC Quarterly Bulletin, January 1959.
16. Powell, R.: *SPC Sponsors Pearl Shell Investigations in the Cook Islands*, SPC Quarterly Bulletin, January 1960.
17. *Guidance Policy for Overseas Pearl Culture*, Fisheries Agency Aquatic Review, Vol. 10, February 1958, Tokyo, (in Japanese).
18. *Report of Investigation Committee*, on returning from Australia, for the development of Japanese-Australian Pearl Culture Industry, Sinju Shimbun (15.4.1964), Tokyo (in Japanese).
19. Goichiro Uno—Chief Fisheries Officer, Fisheries Agency: *The Important Responsibility of the Overseas Pearls*, Sinju Shimbun (24.5.1964), Tokyo (in Japanese).
20. Australian Broadcasting Commission News Item (1 April 1964) re: *South Sea Pearl Culture under Japanese Legislation.*
21. From agreements of Japanese-Australian ventures in the possession of the author.
22. *Pearl Man with a Problem*, The Bulletin (18 January 1961), Sydney.
23. Western Australian Fisheries Bulletin: *Progress in Pearl Culture*, September 1961.
24. Australian Fisheries Newsletter, Canberra: *Signs of Revival in Pearling*, January 1964.
25. Australian Fisheries Newsletter, Canberra: *Australia Processes Half Pearls*, June 1966.
26. Pacific Islands Monthly, Sydney: *Pearls, Pearls, Pearls*, February 1966, page 137.
27. Papua New Guinea House of Assembly Debates, Vol. 1. No. 13, pp. 2338, 2339. No. 14. pp. 2679, 2692, 2706.
28. Pacific Islands Monthly, Sydney: *Pearl Expert Sees Rich Future for Pacific's White Gold*, September 1965, pp. 61.
29. George, C. Denis: *The Cultured Pearl—Its History and Development to the Present Day*, The Australian Gemologist, issues: June 1966 to January 1967. Lapidary Journal of America: July, August, September 1967.
30. *High Concentration of Salt Water for the Treatment of the Polyceata Worms*, Sinju Shimbun (11 February 1966), (in Japanese).
31. *100% Effective Method for the Eradication of the Parasite Worms*, Sinju Shimbun (1 December 1963), (in Japanese).
32. *Average Unit Price Drops*, Sinju Shimbun (1 October 1964), (in Japanese).
33. *Decrease of Productivity*, Sinju Shimbun, (1 March 1965), (in Japanese).
34. *Actions to Prevent the Thin Deposition on Pearls*, Sinju Shimbun (21 May 1965), (in Japanese).
35. *Abnormal Growth of* Mytileus edilus *Causes Damage to Pearls*, Sinju Shimbun (1 September 1965), (in Japanese).

ASIAN PACIFIC RAT CONTROL SOCIETY

An Asian Pacific Rodent Control Interchange, sponsored by the East-West Center, was held at Honolulu from 17 to 27 June, 1968. In addition to the U.S.A. and a number of Asian countries, Fiji, B.S.I.P., Guam, T.T.P.I., American and Western Samoa, G.E.I.C., the Cook Islands, and the SPC were represented.

The Asian Pacific Rat Control Society was formed at the conference with the object of promoting the more rapid exchange and dissemination of information on rat control. The SPC's Rat Control Officer (Mr E. J. Wilson) was elected chairman. Hitherto, not only has up-to-date information from outside the Commission's area been difficult to acquire but also the results of rat control work done by territories themselves have sometimes received less publicity than they deserved.

Membership is open to all whose work involves rodent control. A quarterly newsletter will be published, and members are asked to contribute a brief summary of their rodent control work and to discuss any technical difficulties encountered. Inquiries about the society may be addressed to the South Pacific Commission.