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Conservation efforts intensify worldwide - Part I NATIVE FWMS IN GREAT PERIL

by Richard J. Neves

The decline of freshwater mussels (the families of *Margaritiferidae* and *Unionidae*) in the United States had been most readily evident and documented over the last half century, long before passage of the Endangered Species Act (ESA) of 1973.

At the turn of the century, the problem of water pollution and its effects on mussel beds was already evident. During the first half of this century, the construction of large dams on mainstream rivers created voluminous impoundments that eliminated literally thousands of miles of riverine habitat... along with associated fauna.

The silent crisis of ecosystem destruction and biodiversity losses was most evident in the southern U.S. Because most indigenous mussel species were incapable of survival or reproduction in these reservoirs, healthy populations died out and were replaced in some cases with an assemblage of non-indigenous unionids of exotic bivalves that blossomed in abundance. Many of these invasive unionid species were of commercial value and provided new populations capable of sustaining commercial harvest, as did riverine mussel beds during the era of the pearl button industry.

The long-term costs to biodiversity from anthropogenic actions to create more electricity, recreational opportunities, flood control, and other benefits to society began to be evident in the 1960s when mussel populations not immediately depleted or destroyed by impoundments, water pollution, and general habitat destruction began a steady decline.

The great longevity and high number of cohorts in riverine populations are such that the lag time between reproductive impairment and measurable population declines may extend for more than a decade. Thus, the ruination of mussel resources may be documented years after the causative problem began.

In my opinion, species declines in the 1970s stemmed from, in most cases, earlier catastrophic events (excessive pesticide usage, toxic spills, illegal discharges, coal waste releases, etc.) and cumulative changes to environmental suitability (e.g., impoundment, dredging, water

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The Royal Collection of Natural Pearls **A STRANGE VIETNAMESE FIND**

The July, 1997, *Smithsonian* magazine contained a fascinating article on an unusual pearl find written by James Traub and photographed by Michael Freeman. Due to space constraints, we could not reproduce the article in full, but herewith provide the following precis. We highly recommend, if you are so inclined, that you go to your library, find the back issue, and read the entire story for yourself.

O ne afternoon in 1993, a jeweler, collector and connoisseur was sitting in his Manhattan office when he received a phone call from a Swiss gem dealer. "I'd like to show you something very interesting," the dealer said. "Would you be free sometime today?"

In five minutes, the dealer showed up, and he casually opened the box he was carrying. Inside there were 23 pearls. The pearls were a brilliant orange color, and the largest among them was 32 millimeters – bigger than a robin's egg.

The collector had never seen an orange pearl of any kind, and he asked "Are these natural?" The dealer said "Oui," but admit-

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The International Pearling Journal



EDITORIAL

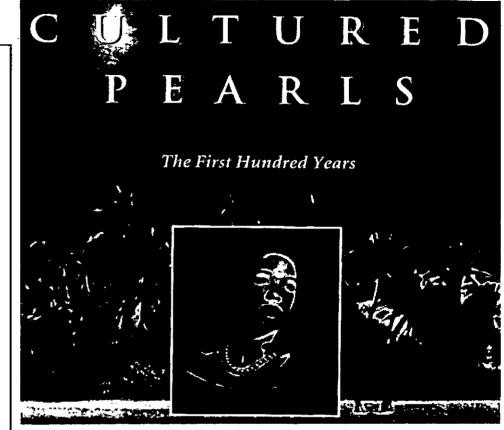
try not to climb on a soapbox very often, but the times sorely demand it. A case in point: the egregious bypassing of traditional wholesalers by Japanese and Tahitian producers who just just want to line their pockets with more gelt.

More and more often, certain producers from these regions are invading the home turfs of those who- over many, many years- were responsible for creating their successes in the first place.

I'm not against free enterprise... but there have to be some ethics involved. It seems a very shortsighted gamble. Sure, they can keep raising their prices and keep getting away with it, because they're simply moving their own goods from one sector of their business to another, and because there're now no middle men. But the smaller buyers they're courting often don't have the wherewithal to purchase large lots and/or quantities of gem quality goods at a time.

Ergo: the only supposition one can come to is that they're trying to flog off lower quality stock to the uninitiated. And they seem to be getting away with this, too.

EDITOR



A MODERN OUTLOOK

Here's a new pearl book that's been needed to be written for quite some time now. Its name is *Cultured Pearls: The First Hundred Years*, written and published by Andy Müller for the Golay Buchel Group.

"This book is intended to set the record straight," writes Andy in his Foreward, "to fill in some of the gaps [of the many pearl books which have come before]... It is written for people on all levels of the trade, as well as consumers who have purchased or intend to purchase cultured pearls.

"I wanted this work to remain purely factual, not an easy task when the subject has so many romantic implications," he continues. Adding: "I have written under strict discipline and tried to follow a self-imposed motto: *Educational*, yet interesting."

This he has done, and done exceedingly well. Readers will enjoy Andy's no-nonsense coverage of all facets of the pearl business... particularly in regard to the "sea of changes" overtaking the industry in its modern times. It is a book for

its modern times. It is a book for everyone's library: it reads like a novel; yet it also serves as a valuable, up-to-date reference to the "new and still unfolding history of the cultured pearl."

It's a book that is truly "a valuable tool for all who have an interest in and love for this fascinating gem."

Copyright © 1997 by Andy Müller & Golay Buchel Holding S.A., Ave. de Rhodanie 60, CH-1000 Lausanne 3 Cour, Switzerland. ISBN number 4-9900624-1-8. Available in late October / early November through Pearl World for US\$30 each, plus shipping and handling. ◆



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ted that he, too, had never before seen orange pearls. All he could say was that the pearls had been purchased in Vietnam and that they were said to have come from the royal treasury.

As soon as the dealer left, the collector brought his precious cargo to the Gemological Institute of America, which happened to be located nearby.

Kenneth Scarratt, an old friend and one of the institute's Directors of Research, took one look at the pearls and said, "They're from Vietnam."

Having seen one such pearl several years ago and tracing it to a shell found in Vietnamese waters, Scarratt reported that only four orange pearls had ever been recorded... all in the past He was 30 vears. absolutely staggered to see a collection of 23 such pearls, and in such mag-

nificent condition... albeit with a pattern of minute wear marks which probably came from frequent handling over a great period of time- perhaps hundreds of years.

The probability was that these objects were once paid in tribute to the royal family of Vietnam, opined the collector who wrote: "That the Vietnamese emperors would have treasured these intense yellow to orange pearls is immediately understood and felt by anyone who has the privilege of viewing [them]."

As the author of the Smithsonian article, James Traub, similarly mesmerized when he beheld the treasures, writes:

Inside the box- to which was affixed a brass plate reading, "The Royal Collection of Natural Pearls" - were arrayed the 23 pearls in six lines like the spokes of a wheel; each pearl was nestling in its own custom-made cavity. They didn't look like pearls at all. They were strange, marvelous objects, like eggs or marbles. They almost seemed to carry the charge of the sacred.

At first I was afraid to touch them, but [the collector] plucked one up as if it were a grape and said, "Hold it in your hand. It seems to have an internal life to it. If you hold it like this" – he turned a pearl toward the light – "the thing seems on fire."

They were beautiful to the touch--smooth and sleek, and as



Ken Scarratt of the GIA holding a Melo Melo "pearl."

solid as shot. And it was true that if you examined one of the pearls closely, you could see a whole world of lemony freckles and brownish ribbons swimming beneath the gleaming surface like so many sunspots.

Ken Scarratt had provided a specimen of the lovely orange volute shell *Melo melo*, from which he believed the pearls had come. The *Melo melo* is not an oyster but a large snail, or gastropod, found in the waters of Southeast Asia. Vietnamese fishermen call the shell "kulon." Sometimes one comes up with their nets, but rarely- if everdoes a *kulon* hold a pearl.

Researching this find in Vietnam, Traub continues:

Then a fisherman in a sort of dugout drifted up and made fast to our boat. "I have six pearls from the orange shell," he said. "Would you like to see them?"

He sailed away and came back ten minutes later with a tiny plastic case. Inside, packed amid grains of rice, were six tiny pebbles. Four of them were white and nacreous. The other two were larger and coarser; one had a slightly orange cast, and the other was bright orange.

The fisherman, Nguyen Van Huong, obviously considered them rare treasures. His brother, he said, had made a hobby of trying to find pearls from the kulon; it had taken him a hundred shells to find these specimens, which came from a single shell he

had fished up in an area 15 hours away by sail.

If it had taken so much work to find six trifling pearls, it was scarcely possible to imagine the effort required to assemble a collection of 23 enormous, brilliant, flawless pearls. In a country like Vietnam, where wealth and power were concentrated for generations in the hands of the emperor, there could be no one else with thewherewithal to acquire such a magnifi-

cent ensemble.

One of the original owners of the pearls, an Italian gem dealer living in Switzerland, had the last word on this unusual find when he came to New York and met with the collector and the author. Traub writes:

As we sat in the highceilinged gloom of the Harvard Club, [the Italian] said that he owned a string of pearls that had once belonged to Marie Antoinette; an American had paid a million dollars for them during the Depression.

[The collector's] eyes opened very wide, and he said. "If you had to choose between the Marie Antoinette pearls and the orange pearls, which would you take?" And the dealer immediately looked up from his Scotch on the rocks and said. "I'd rather have the pearls of Vietnam." \$

Fair use sourced: © Smithsonian July 1997. Author: James Traub, a staff writer at the New Yorker. Photographer: Michael Freeman, a frequent contributor, based in London



"MUSSEL" from page 1

quality, riparian development).

Passage of the ESA in 1973 and the federal listing of 23 freshwater mussel species in 1976 by the U.S. Fish and Wildlife Service began formal conservation and recovery actions for these species.

The presence of a malacologist in the Office of Endangered Species at this time was a key factor to their listing and to evaluations of other freshwater molluscs known or assumed to be in trouble.

From 1976 to 1995, only 35 other mussel species have been listed as endangered or threatened, in spite of the fact that a much larger contingent of unionid species are viable candidates for federal protection.

The distribution of these 58 federally listed species is highly skewed to the southeastern U.S., with the states of Tennessee and Alabama assuming the lion's share of responsibility for their protection.

National Strategy Document

In the face of declining mussel populations, the invasive zebra mussel, and likely revisions to the ESA, the overture of a national conservation plan could be viewed by cynics as analogous to reassigning staterooms on the Titanic.

In spite of these uncertain times and the prospect of a political bottleneck to mussel conservation, a national strategy has been prepared to address the woeful state of freshwater mussels in the U.S.

The goal of the national plan is to conserve native freshwater mussels, to ensure their continued survival, and to maintain their ecological, economic, and scientific values to our society.

To achieve this goal and to assimilate the combined wisdom of biologists, administrators, conservation groups, the shell industry, and other interested parties, a document was prepared to identify the problems contributing directly of indirectly to the fauna's demise and to recommend actions or management strategies to reverse the downward trends in populations and decelerate extinctions of highly endemic species.

The strategy document identifies 10 problem areas in need of attention by a cadre of agencies, professionals, and local citizenry.

Problems that can be addressed within the mission, authority, or responsibility of particular agencies or organizations can be prioritized and acted upon through the suggested strategies.

The following problems have been cited as key issues to be addressed to achieve a national conservation program:

- 1. A coordinated national conservation strategy for mussels does not exist.
- 2. Quality mussel habitat continues to be lost.
- 3. Insufficient information is available on basic mussel biology.
- 4. Insufficient information is available on current and historic mussel populations.
- 5. Insufficient information is available as to how habitat alterations affect mussels.
- 6. Invasion of zebra mussels threatens native mussel species and populations.
- 7. The public has a lack of understanding of the plight and value of mussels.
- 8. Mussel propagation technology is not fully developed.
- 9. Mussel captive holding and reintroduction technology is not fully developed.
- 10. Insufficient funds are available for mussel conservation and recovery.

This outline of issues and the corrective strategies discussed in this document do not include all conservation efforts currently under way, nor do they define all actions needed for the long-term success of a national conservation program.

The intent of this document is to provide guidance to interested participants and to serve as a lightning rod to effect change and improve coordination at the state and national levels.

Acceptance of this document by natural resource and regulatory agencies at all political levels would resolve the stumbling block identified as problem #1 and lead to much greater participation and concern for he fate of native freshwater mussels and the ecosystems upon which they depend.

Freshwater mussels can serve as the umbrella taxon, being the indicator of environmental change in stream and rivers and focusing corrective actions on water quality, physical habitat degradation, and exotic species expansion by the appropriate resource agencies.

It is hoped that the national strategy will serve as a call-to-arms to attack the molluscan crisis before a spasm of extinctions is inevitable.

Unionoid Conservation on a Global Scale

We are currently experiencing a temporally compressed repetition of the geologic record for molluscs, with a spasm of extinctions similar to that recorded in the Permian and Cretaceous periods. However, the present time scale is measured in decades rather than geologic eras.

This most ancient of extant animal groups, dating back more than 500 million years, has been among the most successful and diverse, radiating to



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occupy most terrestrial and aquatic habitats world-wide.

From a global perspective, the molluscan taxa reported to be threatened and endangered by the International Union for the Conservation of Nature (IUCN) reflect an obvious geographic and scientific bias. In a recent review of 1,130 species and subspecies of molluscs identified as at risk or recently extinct, a bias was noted toward (1) adequately sampled countries, (2) nonmarine molluscs, and (3) families well-studied with sufficient historic and recent records of distribution.

Also noted were common characteristics of jeopardy-prone groups of molluscs to include actively evolving taxa, relatively large body size, restricted distributions, habitat and food specialists, and specialized reproductive traits. As with most other animal phyla, degree of specialization is directly correlated to probability of extinction in today's altered ecosystems.

Although the IUCN assessment is a very limited and admittedly biased overview of molluscan taxa at risk, the status of Unionoidea is globally dismal. The precipitous decline of freshwater mussels in the U.S. also is being documented in many other countries. *Margaritifera margaritifera*, *M. auricularia*, *Pseudanodonta complanata*, and *Unio crassus* are recognized as threatened throughout much of Europe, the United Kingdom, and Russia, with two other species threatened in more localized areas.

Many species of the family Margaritiferidae have declined markedly in range and abundance. In Central Europe, the eastern pearlshell or pearl mussel (M. margaritifera) is now on the verge of extirpation with greater than a 75% reduction in range. The decline of pearl mussel populations in Southern Europe is comparable to that in Central Europe.

In Scandinavia, habitat degradation and acid deposition effects threaten the pearl mussel. The species has been protected in Finland since 1955 because 75% of resident populations have been lost during this century. Domestic and industrial wastes, intensive agriculture, and habitat degradation jeopardize the continued existence of this and other species throughout much of Europe.

Large populations of pearl mussels reside in northwest Russia, but periodic poaching of host fish (salmon) and of the mussels by pearl seekers has reduced many populations. Regrettably, most countries with *unionoid* species have poor survey and range records to evaluate the status of their populations. Thus, the status of freshwater mussel species throughout much of their total range is undetermined and grossly underrepresented in the periodic IUCN Red Lists that identify species at risk.

The primary actions required to conserve molluscan diversity worldwide are identified as:

- 1. Acquire and manage threatened habitats on islands, in aquatic ecosystems, on continents, and on coral reefs for the conservation and protection of the native molluscan biota.
- 2. Develop the database necessary for knowledge of molluscan diversity.
- 3. Prevent the introduction of alien species that have negative impacts on native mollusc species and control and eradicate these exotic species where such introductions have already occurred.
- 4. Establish self-sustaining captive populations of endangered mollusc species and support their eventual reintroduction into their native habitats.
- 5. Promote public awareness and concern for molluscan conservation programs.

An independent evaluation of commercial shellfish resources stressed the need for genetic resource management as well. The commonality of globalneeds for all molluscan taxa with those of national needs for our unionoid fauna is readily apparent. Perhaps our national strategy for the conservation of native freshwater mussels will serve as a model for similar nationalistic documents, to be prepared by other countries also experiencing precipitous declines and a potpourri of threats to their native unionoid fauna. \clubsuit

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Part II of his report- which deals with a subject central to cultured pearl farming worldwide ... for without adequate supplies of freshwater mussels (especially certain U.S. species which are highly prized for their properties in manufacturing the nuclei that are implanted into many of the world's major pearl oyster species) the future of the cultured pearl industry could well be in jeopardy- shall appear in our next issue.



SCANNING THE PEARL WORLD

TAHITI President Gaston Flosse paid tribute to two of the world's prestigious pearl wholesalers who were among the first to believe in Tahitian black cultured pearls, and who were instrumental in buying and exporting them throughout the world. Tahiti Nui Order medals were presented to Takezo Koyama of the Tokyo Pearl Group and Andy Müller of the Golay Buchel Group in separate ceremonies at President Flosse's residence in Papeete in late August. Mr. Kovama is President of the Japan Black Pearl Promotion Association; during the 19th Poe Rava Nui International Pearl Auction last October, his company bought one lot of 153 drop and circular pearls. paying the equivalent of US\$21,658. Mr. Müller has been visiting Tahiti regularly since 1977, when he bought his first lot of Tahitian black cultured pearls for Golay Buchel. Strengthening Tahitian ties, Golay Buchel's Lausanne-based Olivier Ramel is President of the Swiss Importers of Cultured Pearls; and during the first week of August, eight representatives of Golay Buchel Asia visited with pearl farmers in French Polynesia. Congratulations to Knights Koyama and Müller upon receiving their Chevalier dans l'Ordre de Tahiti Nui awards... Better quality pearls are being



exported at better prices, reports indicate. For the first half year, the price-per-gram jumped approximately 21% higher than the same period last year; volume was 1,437kg of exports, worth some 3.7m CFP. The U.S. replaced Japan as the number one export market in June, achieving some 33.5% of the overall export volume and 33% of the overall export value. Japan's share dropped from 63% to 24% in volume, and from 75% to 26% in value. Affecting these statistics were fluctuating currency exchange prices: as of mid-August, the Japanese yen reached 95.4 CFP, while the US\$ rose slightly above 110 CFP. This bodes well for buyers at the 20th Poe Rava Nui auction to be held October 17-18 in Papeete... G.I.E. Perles de Tahiti is embarking upon its first worldwide advertising campaign in

September issues of Italy's Vogue Gioello Spain's and Arte Y Joya to coincide with expanded marketing efforts in both countries. One of hottest the names in the fashion world. Simonetta Gianfelici, an Elite model, has signed on with the Tahitian pearl marketing organization as official



Doug Ordway's shot of Simonetta being used worldwide by G.I.E. Perles de Tahiti.

spokesperson to spearhead overseas promotional efforts. A weeklong location photo shoot on Marlon Brando's atoll of Tetiaroa and the Tuamotu atolls of Manihi and Rangiroa has resulted in a classic photograph by famous American photographer Doug Ordway: a very tight closeup shot of Simonetta's head and one hand; her hand, holding a collection of multi-colored loose Tahitian pearls, rests atop an expanse of blue lagoon water [Ed: see above]. Promotional efforts are being directed at the Latin American market beginning in September, also, G.I.E. Perles de Tahiti's **Martin Coeroli** reports.

INDONESIA Reports keep circulating of continuing good harvest results. Higher water temperatures and shifting currents caused by **El Niño** have not seemed to affect pearling, but have caused serious drought conditions throughout portions of S.E. Asia. So far, in Indonesia, oyster mortalities appear about normal.



SCANNING" from page 6

INDONESIA/AUSTRALIA Atlas Pacific completed its 1997 pearl harvest, and successfully sold its crop in a sealed bid process that attracted much interest from major international pearl buyers. The combined price tended for all lots was ¥213,789,000 (or about AUS\$2,425,000), which was some 3.6% over pre-sale estimates. Buyers commented favorably about the shape, color and skin quality of the pearls. Of the total quantity sold, 14.2% were rounds; 15.2% semi-rounds; 30.1% drops; 22.8% buttons; 10.4% baroques and 7.3% circles. Through its Indonesian joint-venture partner, the company has obtained its permanent operating license; several successful spawnings have resulted in a good supply of shell for the future, in addition to generating some AUS\$450,000 in sale of surplus spat; and development of a new farm in the Irian Jaya region is underway: the site has the potential to accommodate up to two million shell, equivalent to that of the entire Australian SSP industry.

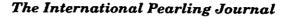
AUSTRALIA The estimated volume of the 1997 Australian crop is thought to be in the range of 415 kan. Reports are that the quality achieved by most producers were "pretty damn good, even for some of the smaller guys" (to quote one source). This jibes with what we heard: that a select few (but not all) of the larger farming operations fared well. One might infer that prices will continue to be high, and that availability will be just about as it always is: tighter as the year gets on... Andy Müller's book (Ed: see page 2) is raising funds for the divers' cemetery in Broome, Western Australia. All proceeds from sale of a limited number of special editions will be sent to the Shire (Mayor) of Broome for much-needed repairs and upkeep. Please contact Andy or ourselves to help in this worthy cause.

JAPAN Problems concerning continuing Akoya oyster mortalities are reported, with significant numbers occurring in Oita Prefecture, and lower numbers in Ehime, Mie and Shikoku. What's to blame? Nobody knows for sure. Perhaps high water temperatures, perhaps high densities, perhaps some sort of bacteria. The Japanese government is pumping some ¥602 million into research and environmental monitoring in an effort to bring this situation under control... In an unusually candid interview, the President of Mikimoto. Toyohiko Mikimoto, commented openly on the widespread panic caused by these mortalities which was accentuated by a 2% rise in the country's sales tax put into effect in April. Consumers rushed in to purchase pearls before the deadline: March sales volumes were up some 300% over the same period last year, and then tailed off some 20% in May and 20% more in June (and more since, we understand). With domestic demand flattened out, producers are turning to export markets such as America to pick up the slack. Admitting that Japan's increasing imports of South Sea pearls were of better and better quality, and that SSP prices were stabilizing along with those of Chinese freshwater pearls, Mr. Mikimoto was uncharacteristically glum in stating: "We cannot determine the cause of the Akoya problem. We are getting lower and lower quality Akova, yet prices keep going up and up"... The Japanese Pearl Exporters Association has ponied up a total of US\$1,620,000 to promote the Akoya in the U.S., Canada, France, Germany, Spain and Italy. Many hope they will oversee spending more judiciously to highlight their goods, and that more modern methods of promotion will do away with such hoary promotions as travelling pearl princesses and amateurish fashion shows which do little justice to the product... Overseas buyers are reporting that prices of 8mm and up Akoya have virtually doubled in wholesale cost, with certain major buyers receiving 20%-30% "Kiwanis discounts" off these usurious prices to soften the edges of product inflation caused by critical supply and soft domestic demand... Reliable reports inform us that at least two- and possibly as many as four-Japanese companies have recently established Akoya pearl farms in Vietnam. The operations will be in the age-old tradition of Japanese export of pearl culturing technology: completely Japanese-run, with the native population providing the grunt work. Infrastructures have already been put in place. Naturally, this news is not being widely disseminated, as it is yet another indicator of the sorry state the domestic industry finds itself at present.

Source: Shinju Shinbun

FOR SALE NUCLEUS MANUFACTURING OPERATION

South Pacific Nucleus, founded in 1990, operates two shops: a 1,000 square foot cube cutting factory in Tijuana, Mexico (with 6 employees); and a 1,400 s. f. finishing, polishing and grading factory in Costa Mesa, California (5 employees). Price: \$150,000 for all equipment and fixtures, on-site training included. Shops can be easily moved, and terms are negotiable. For further details, please fax (714) 645-7110. We will reply to principals and serious buyers only.





JAPANESE PEARL LICENSE EXPORTS

January through June, 1997

Some of our longtime subscribers have asked: what ever happened to your regular statistical reporting on Japanese pearl exports?

So here are the figures for the first half of the year.

One must take note that these statistics no longer separate out South Sea pearls from all others. Thus, you really don't know the categories of pearls involved... and, presumably, the Japanese exporters don't want you to know. It would be a fairly simple task to keep track of Akoya, white SSP, black SSP, and freshwater categories. But with the inspection office phasing out altogether (and with even more relaxed regulatory oversight), no one can count on any meaningful statistical data being produced whatsoever for dissemination to outsiders.

The other factor skewing these figures into even more meaninglessness is that, with the abolishment of advance payments, producers are shipping huge quantities of goods hither and yon to themselves or each other (particularly before the big overseas shows and fairs), and no records are being kept on returns.

June exports alone to the U.S. (just before the JCK Show in Las Vegas) are a good example: up 46.7% in weight, and up 59.8% in US\$ value.

So that's why we don't regularly report on Japanese pearl export statistics: what good do they serve anymore? The answer: no good. \Leftrightarrow

COUNTRY	YEAR	WEIGHT (momme)	AMOUNT (fob US\$)	AVERAGE per momme	COMPARISON	
					weight %	amount %
U.S.A.	'96	883,922	\$55,964,935	\$63.31		
	'97	909,806	61,932,494	68.07	+2.9	+10.7
HONG KONG	'96	453,929	56,288,190	124.00		
	'97	470,649	67,999,922	144.48	+3.7	+20.8
SWITZERLAND	'96	597,780	36,347,095	60.80		
	'97	601,773	40,452,520	67.22	+0.7	+11.3
REP. OF KOREA	'96	217,116	19,733,777	90.89		
	'97	132,485	14,562,788	109.92	-39.0	-26.2
GERMANY	'96	460,534	17,657,629	38.34		
	'97	377,323	17,747,476	47.04	18.1	+0.5
THAILAND	'96	50,588	10,317,232	203.95	-	
	'97	31,831	4,189,136	131.61	-37.1	-59.4
TAIWAN	'96	90,857	10,748,472	118.30		
		89,980	11,174,984	124.19	-1.0	-4.0
ITALY	'96	182,148	9,644,677	52.95		
	'97	167,554	8,553,685	51.05	-8.0	-11.3
SPAIN	'96	178,122	5,805,207	32.59	· · · ·	
		214.801	7.177.227	33.41	+20.6	+23.6
SINGAPORE	'96	22,617	3,834,797	169.55		
	'97	38,587	7,744,763	200.71	+70.6	+102.0
FRANCE	'96	54,398	3,413,666	62.75		
	'97	58,780	3,733,785	63.52	+8.1	+9.4
U.K.	'96	65,106	3,192,249	49.03		
	'97	52,448	3,457,871	65.93	-19.4	+8.3
AUSTRALIA	'96	56,520	2,128,942	37.67		
	'97	23,429	1,396,058	59.59	-58.5	-34.4
BELGIUM	'96	38,931	2,422,427	62.22	**	
	' 97	29,291	2,374,035	81.05	-24.8	-2.0
AUSTRIA	'96	37,583	1,048,877	27.91		
	'97	18,901	1,128,742	59.72	-49.7	+7.6
OTHER	'96	195,095	3,505,522	17.97		
	'97	175,650	3,650,487	20.78	-10.0	+4.1
TOTAL	'96	3,585,246	242,053,694	67.51		1
	<u>'97</u>	3.393.288	257.275.973	75,82	-5.4	+6.3