



## Scientific Papers

### **CAYMAN TURTLE FARM LTD. THE CROCK OF GOLD**

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Many people have heard the apocryphal story about the examination for a finals Economics Degree, when it was drawn to the attention of the examiner that the questions were identical to those set the previous year. "Quite true" replied the examiner, "but this year the answers are different". We are reminded of these changing standards when looking at the battle Cayman Turtle Farm Ltd. has had with the U.S. Departments of Interior and Commerce over their decision to ban farmed turtle products.

One of the very strong reasons put forward by the Department for the ban is their reluctance to believe that the Farm is self-sufficient in eggs, that is, all the eggs required by the Farm are laid on the Farm and none are brought in from the wild. In other words, that our turtles are bred in captivity. Accepting this fact, then sales of our farmed turtle products are legal in every country that has signed the Convention on International Trade in Endangered Species (CITIES). (And of course in every country which has not.)

Now, the U. S. Departments could very simply have come to the Farm and verified what we say is true, but that would be too easy. They feel it is much better to rely on the opinions and statements made by experts, both within and without the Departments. How valid are these opinions? And it is here we come to the changing standards.

When the Turtle Farm first started its operations it collected mature turtles to act as its future breeders and on which it relied to produce its own farm-laid eggs. The farm also brought in wild eggs to make up the required number's. These were carefully collected with due regard for the preservation of the turtle in the wild. The eggs were hatched on the Farm to make up the necessary complement of turtles. It took some three to four years for the breeding animals to acclimatise themselves to captive conditions and it was not until 1973 that the first crop of eggs was laid. Prior to this time, pessimists predictions were floating around that turtles would never breed in captivity as no one had succeeded in producing hatchlings this way.

Coincidentally, in March 1973, a large number of nations met in Washington and drew up the provisions of the Convention (CITIES ) for the protection of sea turtles (amongst other species). In the rules laid down, as previously said, only animals " bred in captivity for commercial purposes" could be traded.

It could be that this phrase was carefully thought out to preclude the Turtle Farm , as it was known in 1973 no mating or egg laying on the Farm has taken place, and it would be expected that turtles hatched from wild eggs would not qualify under CITIES.

Alas, as is so often with the drafting of bills, the wording was not precise enough. As anyone knows from the phrase "born and bred", a perusal of a good dictionary will show that to "breed" means to "raise" so turtles from wild eggs would qualify. In fact, this made doubly clear if one looks at the French translation of CITIES, where one sees the phrase "raised in captivity" for "bred". Ah, say the scientists who are all knowledgeable in languages as well as science - the French have mistranslated the word. Unfortunately for this argument there are six accepted official languages for CITIES: English, French, German, Spanish, Russian and Chinese. In each language the meaning for "breed" can be translated as "to raise" - as from an egg.

Meanwhile the scientists were pouring into the Department their conclusions regarding the possibility of breeding turtles in captivity and the achievements of the Turtle Farm. One leading biologist, head of the Biology Department of a famous American University, said in 1975 in a letter to the Department of Interior, when a proposed regulation was published suggesting that farming of turtles should be recognised if the Farm could be self-sufficient in eggs in two years -

"The prospects for raising sea turtles in captivity 'from a completely self-sustaining stock' in two years are, even by admission of those involved in the industry, nil. Therefore this two-year grace period although perhaps politically expedient, constitutes nothing more than legal sanction of a heavy and unnecessary drain on a threatened species. Since, in my professional judgement, there is virtually no possibility that commercial mariculture of green turtles will ever be carried out with "self-sustaining stock", and since I know of no evidence that "significant progress" is currently being made towards that biologically and economically dubious goal, I suggest: that the Department refuse to consider weaker regulations or longer grace periods, should they be suggested by the mariculture industry."

And the same gentleman in early 1976 wrote:

"I estimate that the chances that mariculture will be producing its own eggs in significant quantities in two years are zero. I am also perfectly prepared, as a scientist intimately familiar with this problem, to state that the chances that they will be self-sufficient in five years are also zero. I will go further: based on the known biology of the green turtle, *Chelonia mydas*, and on the evidence supplied by mariculture, itself, the probability of their being self-sufficient in eggs at any time in the foreseeable future is vanishingly small."

In 1978 the Farm announced it was self-sufficient in eggs.

Meanwhile, the breeding in captivity was progressing at a steady rate and the results were freely circulated to these critical scientists. Another one, analysing the results, came out with the picayune theory that they were not really breeding on the farm, To quote him -

"All of these specimens were bred in the wild. They stored sperm in the spermatheca of the cloaca which reptiles can do. They can breed one year and store it up to seven years in snakes at least, and expend much of that sperm to fertilize each clutch of eggs, In other words, they are not breeding in that lagoon. That is to say, they are not producing the eggs from breeding in that lagoon."

The facts that (a) there was no evidence whatever that turtles can store sperm up to seven years, (b) that some of our older turtles have been in the lagoon for twelve years and (c) that eggs and young turtles had been produced regularly each year since 1975 from mating turtles which themselves had been hatched from eggs on the Farm and had never seen the wild, did not appear to upset him.

Nothing is heard of this theory now - but the damage has been done. There has been no retraction, and a gullible Department accepted one further piece of "evidence".

Let us continue the "bred in captivity" debate. It was gradually becoming clearer that turtles at Cayman Turtle Farm were breeding in captivity, the evidence was accumulating at such a rate it could not be ignored. The next campaign was mounted to persuade the Departments that the dictionary interpretation of the phrase was not what the original Committee of CITES meant when it drew up the wording. Seven members of the Committee (is it coincidence that they were all Americans?) swore affidavits to say that the intention "was to afford an exemption only for those specimens that were conceived and born in captivity and that there was no intention to afford an exemption for breeding programmes that were in any way dependent on wild stocks of wildlife." That, they thought, would put a stop to the Farm, as it immediately made illegal under CITES turtle products bred from wild eggs and would preclude the importation of further wild eggs. (CITES makes it perfectly clear that if a specimen was acquired from the wild before the provisions of the Convention applied, it could be legally traded. This, of course, gives a field day for the lawyers to argue at which date the Convention applied). But the affidavit swearers had not kept abreast of the enormous strides the Farm had made in its breeding programme, so much so that it declared self-sufficiency in 1978, the last year in which eggs were collected.

Was there a joyous reaction from the critics? In no way! Having declared by affidavit what everyone understood by "bred in captivity" they then realised this was not sufficiently restrictive for the stage of development the Farm had reached. Fortunately, there was a meeting scheduled for March 1979 of all countries which had signed the Convention, so shortly before that meeting, our scientific friends got to work on the Department of Interior to get them to modify the affidavit interpretation of bred in captivity and agree that the U.S. delegation to the CITES meeting would re-interpret the phrase with the addition "A parental breeding stock shall be considered to be managed in a manner designed to maintain the breeding stock indefinitely only if it is managed in a manner which has been demonstrated be capable of reliably producing second generation offspring in a controlled environment."

As turtles in captivity take ten to twelve years to mature and as the first animals "bred on the Farm", according to the "affidavit interpretation" were born in 1973, that should bury the question until 1983 or 1985. And at that time, we can always impose the necessity for third generation.

It should be explained that although this interpretation was agreed at the CITES meeting in 1979, delegates other than the U.S. agreed that Cayman Turtle Farm was to be regarded as true farm and its products are legally exported to signatory countries. The results of the meeting, without mentioning the above proviso, were rapidly sent to the Judge of the District Court trying the case to decide the legality of the Department's ban, and reading his judgement it is clear that he was affected by this.

Thus it can be seen that as rapidly as the Farm makes progress to meet the criteria or criticisms laid down, the standards change like chasing the end of a rainbow.

Just to round off the tale of the fight the Farm has had on the scientific front, mention should be made of the pernicious, slanderous and libellous attacks that have been made on its ethics - both in newspaper articles and at scientific meetings. It has been widely stated that Cayman Turtle Farm imports wild turtle products that are repacked, labelled with the Farm emblem and resold. (Why the Farm should do this when it has 50,000 turtles swimming around in its tanks eating their heads off on expensive feed, no-one has stopped to ponder). In other words, the Farm is accused of

"laundering" turtle meat an emotive word when used about a Cayman Island operation. The accusations are made without foundation, and when tracked down are subsequently withdrawn, but the damage has been done the old adage "There is no smoke without fire" is still persuasive. Particularly is this so when officials of the Departments have started such rumours.

It would be more to the point if Departmental officials and decision makers were to stop splitting hairs on the meanings of words, cease to engage in polemics, and concentrate on to main issue the protection of turtles in the wild. If only they could be convinced that we are not taking wild turtles some glimmer of commonsense may shine through. If also the pathological mistrust of the Farm could be overcome it might be possible to sit down and discuss calmly how the Farm might help in preserving the turtle.