

Editorial:

Advances with the Inter-American Convention for the Protection and Conservation of Sea Turtles

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Various notes on the Inter-American Convention for the Protection and Conservation of Sea Turtles (IAC) have appeared in this Newsletter over the past few years (Donnelly 1995; 1996; Somma 1996; Frazier 1997; Anon. 1998). As of the last update (Frazier 1999) the period for signing the IAC had closed (on 31 December 1998), and a total of twelve nations had subscribed to the treaty: Belize, Brazil, Costa Rica, Ecuador, Honduras, Mexico, Netherlands, Nicaragua, Peru, United States, Uruguay, and Venezuela. Of these, only Venezuela had ratified the Convention: on 20 August 1998. The IAC will come into force 90 days after the eighth instrument of ratification has been deposited with the Depository, Venezuela. Once the treaty comes into force, additional "States of North, Central and South America and the Caribbean Sea, as well as other States that have continental or insular territories in this region" may become members by acceding to it, but until that time no further countries can join.

Over the past year there have been numerous advances. Three more countries have deposited their instruments of ratification: Peru on 18 November 1999; Brazil on 22 November 1999; and Costa Rica on 17 April 2000. This brings the total number of ratifications to four, and other signatories are also progressing toward ratification.

On 29 April 1999 the Senate of Mexico approved the IAC, and the following year, on 10 July 2000, the *Diario Oficial* published a decree to that effect, dated 3 July 2000, and signed by the President, Dr. Ernesto Zedillo Ponce de Leon, and the Secretary of Government, Sr. Dióodoro Carrasco. Once the paperwork clears the President's office, the instrument of ratification should be deposited in Caracas shortly thereafter.

The National Congress of Honduras passed Decree 101-99 on 13 July 1999, published in *La Gaceta* (No. 28,931) on 31 July 1999, approving the ratification of the treaty. On 9 August 2000 Resolution No. 031-2000, which was passed on 14 July 2000 by the Secretaría de Agricultura y Ganadería (SAG), Dirección General de

Pesca y Acuicultura (DIGEPESCA), was published in *La Tribuna* (Año XXIV, No 7482, pg 48). This resolution stated that fisheries inspectors would board and inspect shrimp trawlers to confirm if they are using turtle excluder devices (TEDs), and it also provided for sanctions. The resolution invokes the IAC, indicating that the actions proscribed in the resolution flow from being a Signatory to the treaty.

In Ecuador the National Congress passed Resolution No. 21-046 on 30 May 2000, approving the ratification of the IAC. Despite several pressing national problems in Quito, the Ministry of Foreign Affairs resolved a number of internal issues regarding the treaty, and on 14 August sent a recommendation for ratification to the President, Dr. Gustavo Noboa Bejarano. On 29 August the President signed Executive Decree No. 719, ratifying the IAC and instructing the Minister of Foreign Relations to deposit the instrument of ratification with the Depository. By mid September Ecuador should become the fifth country to ratify.

On 20 July 2000 the Senate Foreign Relations Committee of the USA held a hearing on four treaties, including the IAC; and on 26 July the Committee decided to support the Inter-American Convention and present it to the Senate for ratification. It is hoped that the US Senate will consider, and approve, the ratification of the IAC in September or by the end of the legislative session.

Internal legislation has been revised in Belize, strengthening national management plans and facilitating ratification of the treaty. The Government of Belize authorizes a controlled legal take of green (*Chelonia mydas*) and loggerhead (*Caretta caretta*) turtles, during a regulated open season, and they plan to invoke Article IV, paragraph 3 (a) and (b) of the IAC to be able to comply with the terms of the Convention, but also to have a legal harvest of turtles for traditional communities.

The Kingdom of Netherlands consists of Netherlands, Netherlands Antilles and Aruba, so two levels of

STOP PRESS! On 11 September Mexico deposited its instrument of ratification, becoming the 5th country to ratify the IAC, and the treaty office in Caracas has been notified that Ecuador will soon be depositing their instrument.

legislative work are involved in the ratification of this treaty. The Ministry of Foreign Affairs in the Hague, Netherlands, is advancing in the legal process of ratification. In the mean time, the legislature in Netherlands Antilles is working hard to adapt national legislation to comply with the obligations of the IAC. An amendment of a recent law for nature management and conservation has been prepared by government and in the process of being sent to Parliament for adoption. It is intended that both the adaptation of national legislation and ratification will be completed by the end of the year.

On 12 October 1999 the IAC was submitted to Parliament in Uruguay. However, presidential and legislative elections at the end of 1999, and the subsequent development of the five-year budget had to take priority over many other issues. Nonetheless, the treaty has had continual support from various sectors in Uruguay, and it is hoped that it will be ratified by the end of the year. It is not known what the situation is in Nicaragua in regards to the ratification of the IAC.

It is expected that the governments of at least Belize, Ecuador, Honduras, Mexico, Netherlands, and the USA will deposit their respective instruments of ratification in Caracas before the year-end festivities begin in December. Thus, it is likely that the treaty will come into force in early 2001, and shortly after that a number of fundamental aspects regarding its operation will be decided at the first conference of the parties. Basic issues that will be taken up at that time include: the Secretariat, the composition and rules for the Consultative Committee and the Scientific Committee, and funding aspects.

The text of the IAC has served as a model in the development of other international instruments with similar objectives. These include the Memorandum of Understanding (MOU) on ASEAN Sea Turtle Conservation and Protection, as well as the MOU on the Conservation and Management of Marine Turtles and their Habitats of the Indian Ocean and South East Asia (IOSEA). The ASEAN MOU is open for signing, and it is planned that the Conservation and Management Plan (CMP) for the IOSEA will be negotiated early next year. Once the CMP is approved, the IOSEA will then be open for signing. Several concepts, if not terms and expressions, from the IAC have been incorporated into these other sea turtle agreements. To date, the Inter-American Convention for the Protection and Conservation of Sea Turtles is the only legally-binding international instrument that focuses specifically on the conservation of sea turtles and their habitats. In addition to earlier articles published in the *MTN*, various

analyses of the IAC have also been published and/or presented in other fora (Naro-Maciel 1998; Bache in press a; in press b; in press c; Frazier in press; Frazier & Bache in press; Gibbons-Fly in press; McNee in press).

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Rearing Leatherback Hatchlings: Protocols, Growth and Survival

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Leatherback hatchlings are difficult to maintain under captive conditions because they (i) suffer from bacterial and fungal infections when water quality is poor (Frayr 1970) and (ii) are dietary specialists (Bjorndal 1997). Leatherbacks (iii) do not recognize physical barriers (Witham 1977) and can abrade their skin (leading to infections) by swimming into tank walls. To promote their survival in captivity, each of these problems must be solved.

We recently completed a study on the development of leatherback diving and feeding behavior, using juveniles transported periodically to the ocean as subjects. This study required us to rear the turtles for a short time (7 weeks) under laboratory conditions. Here, we report our rearing methods and procedures.

Several workers (Bels 1988; Berkenmeier 1971; Chan 1988; Deraniyagala 1936; Foster & Chapman 1975; Frayr 1970; Phillips 1977; Spoczynska 1970; Witham 1977) have reared leatherbacks. Water quality was strictly controlled (by continual supply or by filtering) in some efforts (Bels 1988; Chan 1988; Deraniyagala 1936; Foster & Chapman 1975), but not in others (Berkenmeier 1971; Phillips 1977; Spoczynska 1970). Turtles have been fed a variety of marine (cnidarians, fish, molluscs, tunicates, and algae) and non-marine (eggs, bread, chicken liver, beef heart) foods, sometimes imbedded in gelatin or edible agar (Chan 1988). Feeding leatherbacks fish can cause gut impaction and eventually, death (Bels 1988; Foster &

Chapman 1975; Witham 1977). But survival was apparently unaffected by other foods as hatchlings survived for long periods on either a variety (Deraniyagala 1936) or a limited array (Bels 1988; Foster & Chapman 1975; Witham 1977) of foods. In some instances (Berkenmeier 1971; Foster & Chapman 1975; Frayr 1970) barriers (netting or foam) were used to protect the turtles from tank walls and surfaces, but in other instances no barriers were present (Bels 1988; Chan 1988; Spoczynska 1970; Witham 1977). Three investigators (Bels 1988; Deraniyagala 1936; Witham 1977) succeeded in keeping turtles alive for more than a year (662, 642, and >1200 days, respectively), but these were the few survivors of initially larger groups of hatchlings.

Most of our hatchlings (n=22) were turtles recovered from nests in Palm Beach County, Florida, USA, three or more days after the majority of the clutch had emerged. Many of these turtles were probably stressed, weak, and had sores or injuries. Had they not been captured, most would probably have failed to emerge and have died in the nest. Thirteen hatchlings emerged naturally and were captured as they crawled down the beach. These turtles were in excellent condition.

Captured hatchlings were housed in a large room. Prior to capture, the floor was disinfected with a 10% Chlorohexadene solution. This procedure was repeated periodically throughout the study. A step pan of Chlorohexadene was placed by the room entrance as a

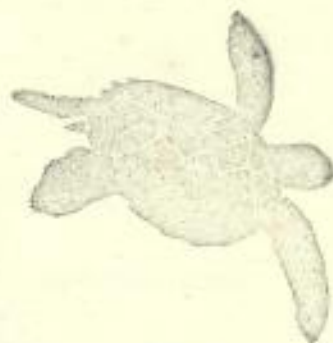
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Mapping the benthic habitats of Puerto Rico and the US Virgin Islands (pp. 26).

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