Weighed down by his 30 kilogramme collection of over 700 turtle eggs, the young man plodded on wearily but contentedly over the soft beach sand. It had been a good night. Poachers had not stolen any clutches on his beat, a 10 kilometre stretch near Madras. By daybreak the eggs together with those collected by his team-mates would be buried at the hatchery set up by the Students Sea Turtle Conservation Network, secure from predation by humans and jackals. Just a small but collectively important contribution to the rehabilitation of sea turtles—those magnificent reptiles that swim through the oceans in breeding migrations that may cover 4000 kilometres each nesting season. Of the eight surviving species of sea turtles now recognized, five are found in Indian waters and four of these nest on Indian beaches. However, there exists the hard reality: sea turtle populations have been declining alarmingly all over the world. Several have been exterminated, including some populations in India.

Adult sea turtles weigh between 35 kilogrammes to over 650 kilogrammes, according to their species. The largest is the leatherback turtle which outgrows the giant land tortoises of the Seychelles and the Galapagos islands. In India, leatherbacks nested in good numbers in Kerala.
upto the 1920’s. Today, nesting on mainland India has been wiped out, a result of indiscriminate collection of eggs for human consumption, slaughter of nesting females on the shore and beach ‘development’ and alteration. Substantial nesting by leatherbacks is presently known from only two islands, Little Andaman and Great Nicobar, and these populations are also under siege.

Two turtle species—the green turtle (whose fat rather than shell is greenish) and the aptly-named hawksbill turtle have fared a little better, with viable populations still surviving along India’s western and southern coasts as in the Andamans, Nicobar and Lakshadweep. In the past, green turtles have been instrumental in accelerating exploration, colonization and conquest in several parts of the world: they provided ship crews with palatable meat “on the hoof,” for the turtles could conveniently be “turned turtle” during their nesting emergences and stored alive on their backs in a ship’s hold for weeks and even months.

Until the 1970’s when India’s sea turtles received total legal protection, quantities of turtle meat, oil and “tortoise shell” were being exported. Tortoise shell, the thick plates on the bony shell of the hawksbill turtle, could be moulded by heat and given a high polish. Until the advent of plastics, combs made from tortoise shell were popular, and even today the hawksbill’s beautiful colours—a mosaic of reddish, yellow and black—are often imitated in combs.
made from synthetics. The flesh of the hawksbill is, on occasion, poisonous to humans if consumed. The poisons present in certain marine organisms build up in the tissues of hawksbills that eat them. Thorough cooking is reported to detoxify the flesh, but I have observed Nipectores who consumed, with relish, raw minced hawksbill meat—a practice that struck me as a variation of Russian roulette. In Tamil Nadu, the livers of suspect turtles were sometimes fed to crows as a test for toxicity.

The olive ridley, probably the most abundantly found species of turtles, nests on several beaches on India's west and east coasts and on the islands, but nowhere in the world can turtles be seen as spectacularly as at Gahirmatha in Orissa. Here, every year, in two spells of about 10 days each, over 100,000 females—in some years over half a million—come ashore en masse to lay their eggs and to mate at sea with males that migrate with the females in presumably comparable numbers. The occurrence of such extraordinary congregations *arribada*—was documented for the first time only in the late 1940's in Mexico. The sensational *arribadas* in Orissa—the biggest in the world—came to light as recently as 1974 but their importance: environmental, scientific, aesthetic and economic, was speedily recognized by the government which initiated research programmes, instituted a sea turtle sanctuary within what is now the Bhitar Kanika National Park and halted the exploitation of eggs and offshore trawling of adult turtles. Despite this, many turtles poached elsewhere along the coast still reach West Bengal for human consumption, though their open, unrestricted capture and the sale of eggs by the boatload have passed into history.

The loggerhead turtle is seen in India mainly in and near the Gulf of Mannar where a small feeding population survives. Curiously, though the world location most favoured by this species for egg-
laying lies in the Arabian Sea
(Masirah island in Oman),
loggerheads have yet to be found
nesting on Indian shores.
A sea turtle's clutch usually
consists of over a hundred soft,
white, ping-pong ball sized eggs
buried half a metre in sunwarmed
sand where incubation occupies 45
to 60 days. Warmer temperatures
shorten the incubation period. The
sex of a hatching is decided not
during fertilization but by
incubation temperatures. If the
developing clutch escapes predation
by mammals, monitor lizards and
humans, most eggs hatch.
Hatchlings take about three days to
tunnel to the sand surface in large
groups which then dash seaward
unless disoriented by artificial
lighting on shore. Many may fall
prey to ghost crabs and monitor
lizards on land; the majority
succumb at sea, mostly to predatory
fish, some to sea birds. Out of a
thousand hatchlings, one may
survive to outgrow most predators
but still remains vulnerable to
sharks, killer whales and humans.
After turtles mature they then
remigrate, uncannily, to beaches
where it is presumed they had
hatched: the females to deposit their
eggs, the males to mate. Having
crawled into the sea as hatchlings,
males almost never return to land
again, and females do so only
briefly to lay one or more clutches.
In some species, up to 11 clutches
totalling over 800 eggs may be laid
at roughly 10 day intervals during a
nesting season which for an
individual turtle may recur two or
more years apart. Some olive ridleys
nest annually.
Leatherbacks eat jellyfish, a habit
that has killed some turtles after
having swallowed polythene
wrappers mistaken for jellyfish.
Green turtles are herbivorous as
adults. Other species eat crabs,
molluscs, sponges and diverse
marine creatures.
All sea turtles except one, the
flatback, are globally threatened
with extinction. In concert with
international efforts to save,
conserve and manage them, several
organisations in India within and
outside the government have
undertaken programmes involving
research, surveys and protection,
which include the operation of
turtle hatcheries. Their efforts,
together with governmental
determination to ensure the
inviolability of the remaining
feeding and nesting habitats will, it
is hoped, give India's sea turtles a
chance to recover and to fill their
niche in our marine environment.