

# "So Near and Yet So Far . . ."

## *A Report on the Sumatran Rhinoceros Captive-Breeding and Conservation Operation*

*by Francesco Nardelli*

When the female Sumatran rhino, Subur, captured by our operation in Sumatra, joined the male Torgamba at Port Lympne in August 1986, we rejoiced in the belief that at last we had a breeding pair of this highly endangered mammal. But, alas, this was not to be. Subur died of a bacterial infection in October last year. The loss was all the more bitter for the fact that we had been catching very few females indeed in our capture area, Torgamba within Sumatra's Riau province in Indonesia.

Another female caught earlier by our expedition, in January 1986, had died soon after capture, of self-inflicted injuries while still corralled in the forest. Since then, apart from Subur, it had been males all the way. Curiously, the Malaysian counterpart to our operation has captured nothing but females! Our gloom deepened at the news of the death in Thailand that very same month of Melintang, a Malaysian female who had been presented to Thai royalty in December 1985. Also, around our Torgamba base-camp area itself, we were dismayed to find logging and clearance suddenly resumed, despite what we had believed to be a freeze for the duration of our project there. For this reason amongst others, we have been pressing for removal of our operation to another area, west of Torgamba.

Still, there was some good news. In February this year, our team in Sumatra caught another male, Rokan, the third animal discovered with a serious poachers' snare wound to one of its legs, testifying once more to the urgency of this operation in an area where forest cover is rapidly being replaced with oil palm plantations, leading to intensified human penetration of rhino habitat. Rokan is still being held at our forest base-camp, pending his habituation to human contact and the new

experience of captivity. We have found this slow pace of "acclimatisation" vital to the well-being of this extremely sensitive animal.

In May this year we put together another potential breeding pair, thanks to the exchange of our male, Napangga, for one of Malaysia's females, Dusun, to couple with the male Jalu at Jakarta's Ragunan Zoo. Such international co-operation is exemplary and lies at the very heart of what we are trying to achieve.

The best news of all this year was probably our capture in late July of yet another female, Meranti. Naturally, in view of our past misfortunes with females, she is being treated like the gold she is, and we shall not be attempting her transfer to Port Lympne until the English winter is over, when she will have a better chance of acclimatising without any serious mishap. She too remains at the Sumatran base-camp for the time being. Meanwhile, at Port Lympne, Torgamba still awaits his mate; he is healthy and doing well. As with his counterpart, Jalu, at the zoo in Jakarta, the speed and ease with which he has settled into captive life gives cause for optimism about the future of this breeding project.

This brings the world total of captive Sumatran rhinos to 14, compared with none between 1972 and 1984. The distribution now is six females to one male at peninsular Malaysia's Malacca Zoo; a male captured in the East Malaysian state of Sabah, on the island of Borneo (again bearing a hunters' snare wound); a male and a female at Ragunan Zoo in Jakarta, Indonesia; a male and a female still held at the Sumatran base-camp; one male at Port Lympne in England.

The fourteenth, not listed above, deserves special mention as the first baby Sumatran rhino born in captivity this century, the product



of a female at Malacca Zoo, Rima, who was found pregnant on capture. This little bundle of joy, named Aminah, was born in May this year, bringing Malacca Zoo's total Sumatran rhinos to seven females and one male.

From outside our operation area, in October last year, came the news that a new population of Sumatran rhino had been located in Sarawak, where there have been no reports of any for a very long time indeed. Although welcome, it seems that this was hardly good news to the Malaysian Department of Wildlife and National Parks, which had been trying to keep the whereabouts of this valuable population secret in an effort to stave off potential poachers.

Equally welcome news was the signing in June of an agreement between our friends at the American Association of Zoological Parks and Aquaria (AAZPA) and the Indonesian government, which provides for the capture by AAZPA of seven pairs of Sumatran rhino. Of these, five pairs will be taken to American zoos for breeding, with the remaining two pairs staying at the zoo in Jakarta.

I have been in constant contact with the AAZPA representatives — Dr Warren Thomas, Director of Los Angeles Zoo, Dr Thomas Foose, AAZPA Conservation Coordinator based at Minnesota Zoo, and Dr Bill Zeigler, General Curator of Miami's Metro Zoo. The AAZPA's fresh injection of finance and expertise (including techniques such as artificial insemination and embryo transplant) into the international drive to captive-breed these animals can only benefit all of us.

Together with Dr Foose, I attended the Fourth IUCN/SSC (International Union for the Conservation of Nature and Natural Resources/Species Survival Commission) Asian Rhino Specialist Group (ARSG) Meeting in Jakarta on 13th-14th October 1986. There, representatives of Indonesia, Malaysia, Thailand, Great Britain, the USA, and the World Wildlife Fund (WWF) debated some of the key issues and problems arising from our experiences so far. Naturally, with the Sumatran (*Dicerorhinus sumatrensis*) and Javan (*Rhinoceros sondaicus*) species clearly so vulnerable at the moment, discussions focused

on these two: the third Asian species, the Great Indian One-horned Rhinoceros (*Rhinoceros unicornis*), is in fairly good shape, with a total population of 1100 in India, Bhutan and Nepal, despite WWF's shocking recent revelation that no fewer than 223 were poached between 1982 and 1985.

"The prospects for the long-term survival of the rhinos in Asia, although grim, need not be hopeless", declared Syafii Manan of Indonesia's Directorate General of Forest Protection and Nature Conservation and Charles Santiapillai of WWF's Indonesia Programme, in an editors' comment prefacing the publication of this meeting's proceedings.

There was far less debate this time on the merits and demerits of captive-breeding per se, probably because the joint Indonesian-British and American, as well as Malaysian, operations are in any case already a fait accompli. However, there was considerable concern to define more clearly the concept of "doomed rhinos", these being the animals targeted for captive breeding or translocation. It was felt that more attention was needed to drawing up guidelines for such a definition. But the mood of the meeting was to reaffirm the determination to pursue both "in situ" and "ex situ" conservation programmes simultaneously, as complementary to one another; the preservation of natural habitats remains as a central task.

Among other topics which provoked discussion was the need for further field surveys, both to census little-known populations and to learn more about the general ecology and behaviour of the shy Sumatran and Javan species. Delegates also stressed the urgent need in countries like Malaysia and Indonesia of financial and technical assistance from abroad to mitigate problems arising from inadequate funding and equipment, lack of know-how and woefully insufficient manpower. However, such countries still express a strong and perhaps understandable desire for their own people to manage captive-breeding at home as far as possible.

Population estimates for the Sumatran rhino still stand at from 450 to 700, including 67-109 in peninsular Malaysia and maybe about 40 in the East Malaysian states of Sabah and Sarawak. Most important of the Indonesian locations are the Gunung Leuser and Kerinci-Seblat national parks and the Barisan Selatan reserve. The two major locations in peninsular

Malaysia are the Taman Negara national park and the Endau-Rompin area, very recently declared a state park (Pahang and Johor states).

Malaysia is proceeding not only with its captive-breeding project at Malacca Zoo (boosted by a M\$4.82 million government grant to the zoo under Malaysia's fifth Five Year Plan, 1986-90), but also with a natural gene-pool set-up at Sungai Dusun reserve, translocating threatened Sumatran rhinos into the reserve where necessary.

In Sabah, the key areas are Silabukan, the newly established Tabin Wildlife Reserve and the Danum Valley. Poaching, which took at least two of the Sabah rhinos annually between 1981 and 1984, has perhaps died down, with no reports at all from early 1985 till now, possibly because of intensive publicity and controversy surrounding the Sabah rhinos and Sabah's own independent captive-breeding programme.

For the Javan species, the count is only 50, confined to the Ujung Kulon National Park area. Despite the scare of at least five sudden, possibly anthrax-related deaths among these Javan rhinos in 1982, the meeting decided that any decision to translocate or captive-breed some of them should be postponed for the time being, in view of the animals' extreme rarity.

Everyone at the meeting also agreed on the urgent need for extensive public education and publicity on rhinos and matters affecting them. In this connection, our Sumatran rhino captive-breeding operation has been working closely with the Southeast Asian press, and Alain Compost, the well-known wildlife photographer, has been documenting every stage of our project on both still and movie film.

Help readers might also like to know that I myself have conceived and directed the production of a major book, *The Rhinoceros, a Monograph*, to be published some time next year by Basilisk Press Ltd of London. Measuring 26 by 20 inches (65 by 50 cm) and priced at from £595 to £3,000 (pre-publication), with original paintings by wildlife artist Matthew Hillier and hand-crafted binding, this is no ordinary book. It covers the full history, biology and conservation of each of the world's five species of rhino, and should focus decision-makers' attention on this dwindling family of prehistoric survivors.





Among the points made in the concluding session of the ARSG meeting, the following were interesting:

- initial setbacks should not deter us from our commitment to captive-breeding;
- there is evidence that rhinos could do well in selectively logged forest, since they are browsers and plant growth quickly regenerates on cleared land: multi-purpose reserves suitable for both forestry and wildlife conservation should therefore be set aside;
- careful and regular monitoring of rhino populations in the wild is essential;
- there is a need for more buffer zones around national parks and reserves;
- there is a particular need for a survey to establish the status of the rhino in Kalimantan, perhaps via a joint Malaysian-Indonesian operation along the Sabah state border: and also in southern Thailand;
- anti-poaching measures must be made more effective;
- both Indonesia and Malaysia are trying to set aside up to ten per cent of their land area for nature conservation, although this is an easier proposition in Indonesia than in Malaysia, which might have to be content with only eight per cent.

Here are the final recommendations of the

meeting:

1. The primary goal is long term-survival of the Sumatran rhino as a species and a component of natural ecosystems.
2. A comprehensive master plan for conservation of the species will be developed, which will be collaborative and multinational in nature, and which will identify and integrate all of the actions necessary to achieve the primary goal.
3. Development and oversight of the master plan will be the responsibility of the SSC Asian Rhino Specialist Group.
4. The conservation programme will include the following three fundamental activities:
  - (i) develop an education programme to enhance public awareness and support for the Sumatran rhinoceros;
  - (ii) provide primary support for a programme of conservation of the Sumatran rhinoceros as viable populations in sufficiently large areas of protected habitat;
  - (iii) establish a captive-breeding programme for the preservation of the genetic diversity of the Sumatran rhinoceros in its countries of origin, among others Indonesia, Malaysia and Thailand, and in North America and Europe, using animals with no hope of survival in the wild.

The parties are committed to contribute to each of these in each country as mutually agreed, with details subsequently recorded in a bilateral memorandum of understanding or similar document.

5. The following principles and actions are to be observed in the captive propagation programme:

(i) Animals selected for capture in the wild are to be "doomed" individuals or come from "doomed" populations or habitats; that is, those whose future long-term viability or contribution to the survival of the species is determined to be unsatisfactory as measured by objective criteria subject to continuing refinement.

(ii) Currently presumed subspecies stocks will not be mixed, either in captive-breeding or in translocation in the wild, until further work is done on their taxonomy.

(iii) The zoo communities will provide support and technical assistance in field capture and transfer operations.

(iv) Bilateral agreements will provide for captive - breeding programmes in the countries of origin as well as in the USA and UK.

(v) Animals sent abroad will be on breeding loan from the countries of origin, or under some similarly equitable ownership agreement of sufficient timespan to protect all interests.

(vi) All animals placed in captivity and their future progeny will be managed co-operatively as part of a "world population" in the light of the primary overall goal of the programme. Decisions will be taken by consultation among the owners and interested parties with oversight by the SSC Asian Rhino Specialist Group.

(vii) Bilateral agreements will provide for appropriate support, training and technical assistance in captive-breeding in the countries of origin.

Apart from my work on the current Sumatran rhino project, I have been working on a new proposal to set up a special centre for the conservation of the Sumatran and Javan species, to be based in Southeast Asia, probably in Singapore. The objective of the centre would be the *in situ* conservation in Indonesia of both

species. Primary activities for the centre would include:

1. *Concentrating initially on the known viable populations* of the above rhinoceroses, located at Gunung Leuser, Kerinci Seblat, Barisan Selatan, and Ujung Kulon;

2. *Fundraising* to further the above objectives, from business and industry, private donors, international or national agencies and charitable foundations, and from governments;

3. *Education* through the various media — posters, books, films, press etc.;

4. *Tourism promotion* as a means of giving governments and their people a stake in the preservation of wildlife and habitats, as well as enhancing public education.

Among the centre's initial, high priority projects would be:

(a) *A Specialist Anti-Poaching Guard Unit* to be established and employed in the relevant national parks and reserves of Indonesia, on the model of those already operating in Nepal's Royal Chitawan National Park. Indonesian soldiers and/or rangers to work alongside them for training purposes.

(b) *A "Tiger Tops" Type Facility* to be set up at Kerinci Seblat — i.e. an environmentally harmonious, luxury tourist accommodation with educational facilities.

In terms of its organisational and financial structure, the centre would be established and run as a charitable trust, hopefully with tax exemption both for its own income and for donors wishing to give sums of money to the centre.

We have come a long, long way since the beginning of this decade. The world conservation movement is now acutely aware of the urgency of all rhinos' plight. We have the beginnings of a captive - breeding potential and have achieved international co-operation on this project. All hard-won successes. In the coming years, I hope we can also reinforce safeguards in the wild, curb the largely illicit trade in rhino products (in this connection, the long-awaited accession of Singapore to the Convention on International Trade in Endangered Species — CITES — early this year was a hopeful sign), and intensify public education. And at Port Lympne, of course, we eagerly look forward to the first offspring sired by Torgamba.