

## MEDICAL RECORD IN SUMATRAN ORANGUTAN QUARANTINE BATUMBELIN-SIBOLANGIT MEDAN NORTH SUMATRA

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Keyword : **sumatran** orangutan, quarantine, medical record

### Introduction

The Sumatran Orangutan Quarantine centre at Batu Mbelin was built in 2002 by the Sumatran Orangutan Conservation Programme (SOCP). The **SOCP works closely** with PHKA to confiscate, quarantine and reintroduce illegally held captive Sumatran orangutans to their natural habitat. The quarantine area itself covers a total of 3.9 Ha and is located near to Sibolangit, an hour from Medan.

There are 3 kinds of cages in quarantine.

1. **Isolation** cages: All new arrivals stay here until their medical check-up is complete and their test results are negative. Sick orangutans must stay longer in ~~these~~ isolation cages whilst receiving medical treatment.
2. Socialization cages: After the quarantine isolation period, individuals are introduced to other orangutans to form small groups, to prepare them for their eventual release in Jambi. At this stage they learn to interact and socialize with each other orangutans.
3. **Permanent** long-term cages: -these are for individuals who can not yet, or can never be released, due to disease or injury e.g. contagious diseases, serious physical handicaps etc.

On their initial arrival, all orangutans must pass a quarantine period during which they undergo a thorough medical examination. This involves taking blood samples, inserting a microchip on left scapula, taking hair samples, fingerprints, PPD Bovine intradermal (tuberculosis) test, tattoo of individual ID number on inside of left thigh, dental photos, thorax x-rays (mostly for TB), faecal samples to check for parasites and administration of de-worming medication (**Anthelmintic**) and any other checks or tests required.

Daily staff activities in the quarantine centre include cleaning the cages twice a day (at 8 am and 2 pm) and feeding the

orangutans every 2 hours (at 8 am, 10 am, 12 am, 2 pm and 4 pm). Keepers also monitor the orangutan's behavior and health throughout the day and report noteworthy observations to the centre vets/manager for each animal's behavioural and medical records.

There is a standardized procedure for orangutan in quarantine:

1. **Newly** arrived Orangutans must stay in isolation cages for a minimum of 3 weeks, during which time they **undergo a** thorough medical check-up and treatment for parasites, **and** they must remain in quarantine until all results on tests for diseases are negative. This follows guidelines resulting from international workshops in 2001 and 2002
2. At the same time as their medical tests, all orangutans get a **tattoo** (identification number) and microchip, and fingerprints and dental photos are taken **for ID purposes**. We also **carry out** full examinations e.g. temperature, **heart** rate, breath rate, body weight. **etc**. The body is also searched for any other signs of disease or illness (e.g. fungal infections etc) and the presence or absence of big toe-nails is noted (again for ID purposes as many orangutans **do not** have them on the big toes).
3. Once pronounced fit and healthy and **after** again confirming absence of noteworthy parasites, orangutans are then transferred to much larger **socialization** cages. Here they are introduced to other orangutans to form a small group. For most this is the first time they have met other orangutans since the time of their capture and the death of their own mother. The first step in introducing orangutans to others or in to an existing group is to place the newcomer in a small cage, from which it

can see the others, but has no physical contact with them. Thus they have visual, but **not** tactile contact. They will stay in this smaller cage for 3 to 4 days. The second step is to allow them access to a larger cage (3 x 3 x 4 metres), adjacent to the others in the adjoining larger cage (6 x 6 x 6m). In this situation the orangutans have direct (tactile) **contact** with each other for the first time, but they are still separated by a barred barrier. Here they are observed continuously by staff to monitor the interactions that result, be they friendly or aggressive in nature, and if any aggressive interactions are witnessed, the orangutans can easily be separated again. If there is still concern, the newcomer will **also** be put back into the smaller cage overnight **and** the process repeated the next day. This continues for a further 4 or 5 days, after which a decision is made whether or not to mix them together in the same cage. By following this very gradual, step-by-step procedure and carefully selecting which orangutans are likely to get along with which others, **stress** is minimized and most orangutans can be successfully introduced in to a group (especially when still relatively young).

**Medical Record**

Since the quarantine was built a total of 137 orangutans have been received and taken care of. At the time of writing, there **are** currently 29 orangutans in the centre and over 100 have been successfully transferred to the orangutan reintroduction site adjacent to the Bukit Tigapuluh National Park in Jambi province.

There have nevertheless been numerous cases of orangutans requiring **medical** treatment for illnesses and injuries obtained prior to their arrival. Diagram 1 shows the relative proportions of different medical cases that we have treated to date.

**Relative Proportion of Cases in Sumatran Orangutan Quarantine**



Diagram 1. Relative proportions of Medical Cases in Sumatran Orangutans in Quarantine up to July 2008; (Note: as **some** orangutans suffered more than one ailment this does not reflect the **proportion** of individuals affected).

This diagram shows that parasite infections (including worms and protozoa) are the most common (54% of all cases, representing 95% of individual orangutans). The 4 most commonly encountered worm species are: *Strongyloides stercoralis*, *Trichuris sp*, *Ancylosofoma sp*, and *Ascaridia sp*. The **most** common protozoa are *Balantidium coli* and *Entamoeba* sp. Trauma constitutes the 2<sup>nd</sup> most common type of medical case requiring intervention in the quarantine (24,67%). Trauma includes:

1. Minor wounds (cuts and scratches due to capture, rusty cages etc)
2. **Serious** wounds (gunshots, dog bite, tight fitting chain and rope injuries, etc.)
3. **Tetanus** infected wounds
4. Fractures and broken bones

**Diarrea** is also not uncommon amongst orangutans arriving at the quarantine. Sometimes this is due to parasite or protozoa infections and sometimes the cause is undetermined and possibly results from **stress**, change of diet etc

Besides these three broad classes of ailments there are also a number of other less common problems we have had to address, such as:

1. Candidiasis.
2. Pneumonia
3. Salmonellosis
4. Birth
5. Myiasis
6. Otemathoma
7. Hepatitis B
8. Hepatitis A
9. Suspect TBC
10. Blindness

Of the 137 orangutans cared for at the quarantine centre to date, only 7 deaths have occurred at the site and all of these were in critical condition on arrival. Tiwi died because of candidiasis infection throughout the body. Bona dead on arrival, choked on own vomit in transport, Abdul dead because of internal infections due to gunshot wounds obtained in Bukit Lawang. Oga dead because of Tetanus, Tala and Maini dead because of parasite infectious.