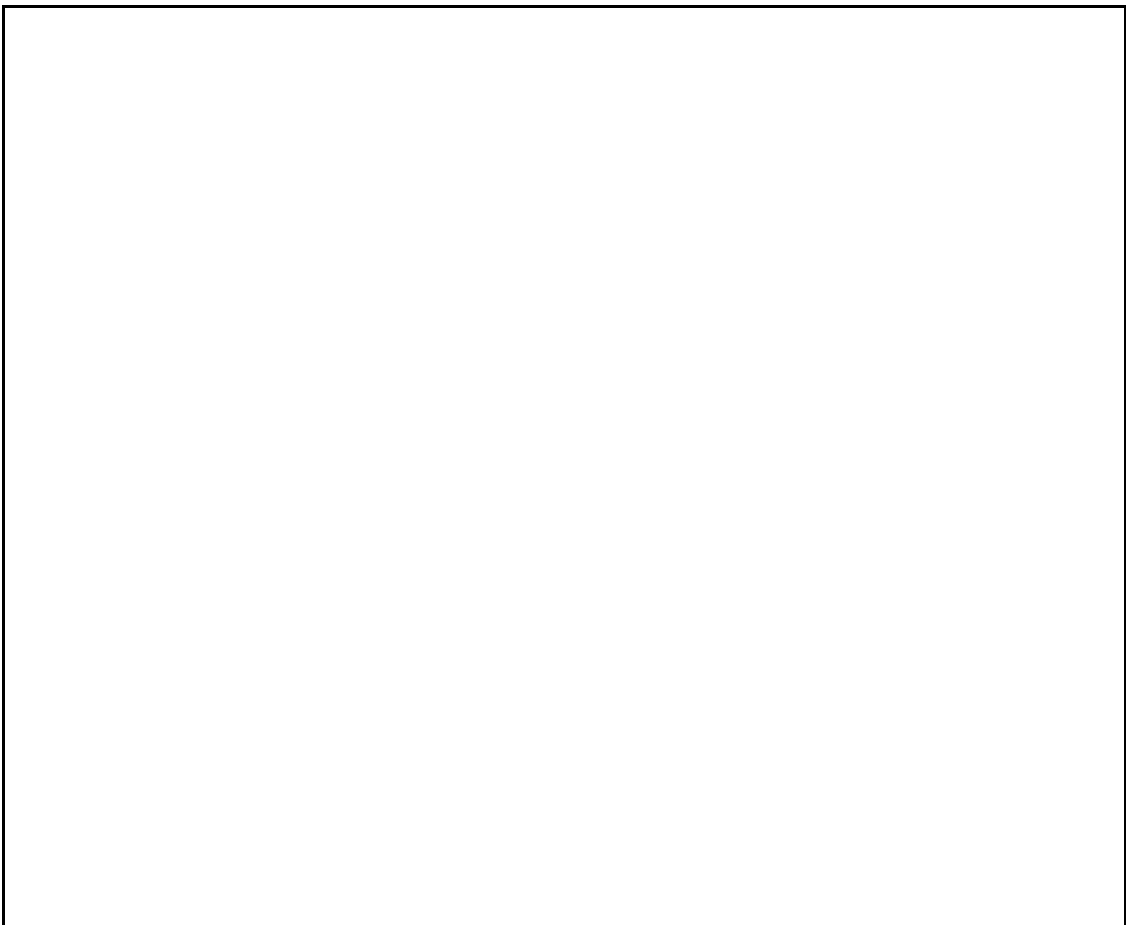


HUSBANDRY GUIDELINES
FOR
NOISY PITTA *Pitta versicolor*



Introduction

Noisy Pitta have a chequered history in captivity due to their complex pair bonding behaviour. Although longevity of individuals has in some instances been impressive for a passerine, at over 14 years (Taronga Zoo) a majority of specimens live less than 3 years. Pittas defend a territory aggressively and in captivity this frequently leads to the death of one animal during introduction or even within long standing pairings. Usually the female is the victim, but not exclusively. There are 3 sub species recognised for Noisy Pitta, however the captive management program is maintained at species level. The intention of this document is to highlight the husbandry challenges with this charismatic species and provide recommendations for their captive management. A majority of the information is based on Taronga Zoos extensive experience with Noisy Pitta, first displayed there in 1936.

| | |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Common name: | Noisy Pitta, also Dragon Bird, Buff Breasted Pitta |
| Scientific Name: | <i>Pitta versicolor</i> (Swainson, 1825) |
| ASMP category: | Management level 1b. |
| O H & S Classification: | Non Hazardous |
| Band size: | 8 |
| Weights: | 108.5g av, range 90- 140g (Taronga Zoo data. n = 35) |
| Measurements | 170-200mm |
| Sexing method: | No external dimorphism. It is recommended that juveniles be sexed at 3 months by laparoscopy or through DNA analysis using feathers. |

1. Taxonomy

| | |
|--------|---------------|
| Class | Aves |
| Order | Passeriformes |
| Family | Pittidae |

2. Natural History

2.1 Morphometrics

The most obvious being that Pittas are characterised, initially, by their rounded wings and fully developed 10th (outermost) primary but 9 secondaries.

2.2 Distribution

Trans fly district of Papua New Guinea, Beehler et al 1986 with far isolated populations in rain forested areas of Cape York, Atherton Eungella and South eastern Queensland South to the Hunter River district (Blakers et al 1984). Swainson described the species in 1825. Gould described the Cape York population as a separate species *Pitta simillima* in 1886. It differs from nominate southern populations in generally having a smaller wing length 114-121 mm.

Twenty-three (23) sexed as male at the Australian Museum. *Simillima* are now considered a subspecies of Noisy Pitta.

2.3 Habitat

Predominantly confined to temperate and tropical rainforest understorey, the Noisy Pitta can occasionally occur in more coastal mangrove habitat.

2.4 Wild Diet and Feeding Behaviour in the Wild

Noisy pittas forage entirely on the ground-locating invertebrates by shifting leaf litter with their bill in a sideways motion and stabbing into the soils. The mandibles becoming caked with soil in the process. Published wild foods include rainforest snails *Sphaerospira fraseri*, beetles, chafers, weevils, fly larvae, sugar ants *Componotus sp.*, wood louse isopods and spiders *Arachnids* (Baker and Vestjens, 1990). Largely terrestrial, Pittas are typified by having a short tail dumpy in appearance with powerful legs and a sturdy bill,

Pittas move over the forest floor in rapid hops turning over forest leaf litter and other decomposing with their bills locating invertebrate prey. The Noisy Pitta is an omnivore, with a significant preference towards invertebrate food items, especially during the breeding season. Noisy Pittas have been recorded eating fallen fruit and berries. One of the fascinating features of this species is in the unique manner by which it extricates the body parts from the shells of land snails. Noisy Pittas use stones or buttress roots as an anvil on which it strikes the snail shell. When the shell is finally cracked exposing the flesh, which is consumed and the shell discarded forming a 'midden'. Favoured 'anvils' invariably have a small pile of snails shells at their base. Some birds make such frequent use of their "anvils" that they become smooth from the constant pounding (Coutts, 1997).

2.5 Longevity

Possibly use of a graph to show wild and captive longevity. Male Female perhaps

3. **Housing Requirements**

3.1 Shelter

The enclosures should be sheltered from adverse cold and windy conditions. The provision for shelter should ensure that the birds have protection with at least 1 third of the roof covered. The feeding area should be enclosed from above and be protected from inclement weather. See drawing. In the wild this species would have protection from intense sunlight wind and torrential rain from the dense sub-tropical and tropical rainforest canopy. This kind of dense planting is not easily replicated in a captive situation and must be provided in the structural design of the enclosure or holding/breeding facility. There would seem to be a correlation between breeding success and heavily planted enclosure, as experienced at Taronga Zoo.

At Taronga Zoo the most successful enclosure for breeding and housing this species is in our heritage enclosures. These have a high (4m), dome and are open to the weather on only a small frontage.

3.2 Water

Essential for drinking and bathing purposes. Fresh drinking water can be offered each day located near their food. A shallow pond can be included for bathing, however care should be taken when chicks are present. As a precaution the pond should be drained just prior to the chicks fledging, at around 12 days or until the chicks are mobile and strong

3.3 Enclosure Furnishings

A naturalistic or reconstructed habitat should ensure that Noisy Pitta are exhibited in the context of its natural environment. A moist soil and leaf litter substrate to a depth of 3-5cm, would allow the pittas to forage.

The exhibit should be thickly planted with hardy and thematically appropriate vegetation, depending on your local conditions. (Appendix two for plant list).

The exhibit should be landscaped with rotten logs, rock piles for potential nest sites, a water feature, a clearing were the pittas can be enticed with mealworms or snails for regular visual checks. Noisy Pittas roost at the highest part of their enclosure, furthermore, in the breeding season males will call from high perches for several minutes at a time. Perches need to be located to provide for these behaviours.

Rainforest habitat simulation requires a reliable irrigation system to encourage lush plant growth. The watering system ideally should be on a timer and set to supplement the seasonal weather patterns. The sprinkler system will help to maintain a microclimate within the enclosure especially in the leaf litter substrate.

3.4 Spatial Requirements

- *For a breeding Pair*

Minimum spatial requirements for a compatible adult pair of Noisy Pittas are 4m x 2m x 3m. Quality building materials and construction are essential as rodents frequently gain access through the smallest of oversights. Predation of Noisy Pittas from rats is the second most common cause of death in captive Birds. (Appendix three for floor plan of a suitable exhibit). One third of the

exhibit should be sheltered with a solid roof. At least one side of the structure should be solid. A safety entrance door must be incorporated into the design, as Pittas are swift and direct fliers, often flushed into flight over the head of an unsuspecting keeper.

The mesh used should be guaranteed rodent proof. At Taronga Zoo 2.5cmx1cm, 1.6 gauge, galvanised weld mesh has been used and has proven to be very effective. It is important to use stainless steel tie wire, apposed to galvanised wire, which corrodes at an alarming rate at Taronga Zoo, which is probable due to salt deposits from local coastal rain. Each individual tie should be secured no less than 10cm apart and the ends twisted 3 times or more on the outside of the exhibit to avoid injury to birds and keepers on the inside.

- *Holding cages for single birds*

At Taronga Zoo Noisy Pitta have been maintained in Noegal cages and in trolley cages for limited periods. Pittas become aggressive to other Pittas from 3 weeks of age, it is therefore essential to house them separately after fledging and on removal from the Dam and Sire. The cages used at Taronga Zoo are varying in dimensions

from 1.2m galvanised steel-cubed cages to 2m long x 600mm wide x 600mm high stainless steel trolley enclosures.

The later cages have a small access door for feeding and cleaning purposes and a larger door for changing perching, cleaning and catching.

4. Handling and Transport

4.1 Capture and handling procedures

Noisy Pitta has a surprisingly strong flight for a species, which spends a majority of its time on the ground. When catching Noisy Pitta in an aviary the easiest method is to herd the bird into a relatively open corner with preferably

two keepers walking slowly towards the bird. Only enough pressure to enable the bird to hop forward is necessary. When the bird is in the right position for an attempt to catch with a hand net the keepers can move closer until the pitta will fly up. Usually they will attempt to go behind the keepers in a straight line. Noisy pittas are a heavy bird in the air and do not exhibit aerial evasive capabilities. The bird can be netted before it flies behind the keepers.

4.2 Precautions in handling

The standard Bird Bander's hold can be used with this species, however care should be taken to avoid injury to the handler inflicted by their strong toes and sharp claws. Noisy Pittas travel well for short distances in calico bags designed for this purpose. Ensure that any loose threads are removed before use, as these can get caught up around the feet of the bird.

4.3 Transport Requirements

5. **Health Requirements**

Fledgling birds have been particularly susceptible to parasitic roundworm (ascarids and coccidiosis) and fungal disease (aspergillosis) in the past. Reducing stress during removal from and introduction to aviaries is an important part of limiting disease. Adult birds are also susceptible to ascarids due to their ground dwelling habits. These are often discovered in monthly faecal screening and treated with any one of a number of anthelmintics.

5.1 Routine Treatments. (Worming)

6 monthly faecal screening:

- Coccidia where detected in young birds is often treated with toltrazuril (Baycox)
- Ascarids and other round worms – may be treated with ivermectin, fubendazol, albendazol or ivanirsole. A follow up faecal ensures efficacy of

treatment.

5.2 Heating Requirements

Within the Australasian region Noisy Pittas have been successfully maintained without supplementary heat at Melbourne zoo, Taronga Zoo and at Adelaide zoo. Excessive temperatures below 5 Celsius and above 35 Celsius as with most species should be avoided. Exhibit design briefs should take local weather conditions into account, to reduce this risk. Shade cloth and overhead sprinklers are effective during extremely hot periods.

5.3 Cleaning

Standard Aviary procedures should be adopted with this species, daily cleaning of food bowls and related equipment, clean drinking water receptacle daily, spot clean over leaf litter for old discarded food items and faeces especially under the roost perch.

The leaf litter should be turned over frequently to avoid souring, and a total replacement of this substrate two or three times a year. If the Noisy Pitta have been provided with a stone 'anvil' and snails, this area will require frequent cleaning.

5.3 Known Health Problems

Post mortems have revealed aspergillosis to be a common infection. Egg yolk Peritonitis, Uratic Nephritis, Salmonellosis and Trauma (night fright) have also been diagnosed. Enclosures should be pest proof, as rats and snakes are known predators of Pittas in captivity.

5.4 Routine Vaccinations

Not required

5.6 Routine Quarantine treatments

Noisy Pittas can be flighty when housed in small Hospital or quarantine cages. To avoid head trauma a padded roof can help protect the birds from self-inflicted injury, and their cage should have brush and hessian for them to retreat from stressful situation.

6. Behaviour

6.0 Social Structure

Noisy Pittas should be housed as compatible pairs or single. Pittas are territorial and even two month old siblings will exhibit strong territorial tendencies resulting frequently in the death of one chick from starvation. Adult birds at Taronga have killed newly introduced birds within minutes if precautionary appropriate introduction methods are not performed see 6.2.

6.1 Habits

Out of the breeding season Pittas are as noticeable for their inactivity as they are for their constant activity during their breeding season (Hobcroft, 1991).

Noisy pittas will sit on an elevated perch and sit still for many hours. They rarely call out of season.

If two females are housed in the same enclosure together, one of them will undoubtedly become dominant over the other, it will start with subtle posturing around the feed area, followed by full displays of threat which will result in the death of the subordinate female if left together. When Pittas engage in combat they fly at each other locking feet and stabbing at each other's heads with their sharp beaks. Death is usually extremely quick.

6.2 Introduction procedures

Naegol cage introductions are recommended. This involves setting up two portable enclosures within a new breeding enclosure, allowing for a familiarisation period of three to four days. This new enclosure in theory does not give home advantage to either bird, as they are unfamiliar with their new surroundings. The portable cages should be placed close enough for the birds to be in visual contact, but not close enough for them to inflict injury on each

other. Females are aggressive to males if placed in their territory. This method has proven to work on all introductions attempted at Taronga Zoo over the past two years. The birds must be released at the same time and a close watch kept on them for the first few days. Noisy Pittas exhibit aggressive behaviours at an early age, at Taronga we have experienced sibling to sibling fatalities at less than 3 months old. Once chicks have been removed from their Dam and Sire it is advisable to house the chicks separately until breeding age (earliest recorded breeding being 6 months at Taronga Zoo) and then introduce them as described in 6.2.

Noisy Pittas do not maintain their nests after incubation commences the nests often fall into disrepair as the season progresses. After fledging the pair will likely build another nest usually in a different location. Provision should be made for adequate fresh nest material, otherwise the Pittas will cannibalise the old soiled nest. Noisy Pittas are not particularly fussy in their choice of nest material, grasses, moss, and fine roots would be suitable. Noisy pittas have been recorded as using the dung of other animal to construct a doorstep in the entrance of their nests. The purpose of this behaviour is not yet known, however it may be a predator deterrent. (Coutt's, 1997) records that Noisy Pittas use decaying wood, possibly as a means of providing a material to absorb the faeces of the young.

6.3 Courtship

Advertising calling (by males only) commences in late September. Between October and April three clutches may be raised by one pair, usual first and last clutches being 10th October and 15th March respectfully. New nest sites may take up to a month to complete or as little as three days.

The call of the Noisy Pitta is rich burree bi-syllabic sounding call often described as "walk to work" and is routinely given in often-repeated phrases, often at night during the breeding season.

6.4 Bathing

Noisy Pittas are frequent bathers and will readily accept any water receptacle in their exhibit. Pittas will also bath or be stimulated to bath when overhead sprinklers are turned on. Clean water should be made available at all times.

6.5 Common Captive Behavioural Problems

Long term compatible pairs have been known to suddenly become aggressive to their partner, in which case, the birds should be split for a period and re-introduced using the technics described in 6.2.

Stereotypic behaviours have been recorded at Taronga Zoo when birds are housed in adjoining enclosures. Noisy Pittas should be housed as compatible pairs or single and they should not have direct visual sight of other Pittas. Pittas are territorial, advertised by frequent and repetitive vocalisation, however this does not seem to encourage adverse stereotyped behaviours.

Pittas have been recorded attacking and killing wild mice and any bird below 150grams should be considered at risk of injury.

6.6 Behavioural Enrichment Activities

Behavioural enrichment activities have been adopted with noisy Pittas at Taronga Zoo over the past fews years. The major improvement in encouraging natural behaviours in our birds has been with the introduction of natural leaf litter instead of wood chip, soil or sand. Pittas spend a great deal of time foraging on the substrate surface looking for invertebrate food, the frequent addition leaf litter such as fig leaves.

6.7 Mixed species compatibility

Noisy Pittas are reasonable tolerant of other bird species. At Taronga Zoo they have been housed with a variety of species however, Pittas have the potential to kill or injure birds, which are smaller than themselves. A cautious approach should therefore be taken with selecting appropriate cage mates. As a general rule Noisy Pitta should not be housed with a valuable or high priority bird in a mixed species enclosure if it has a body weight of less than 100grams. The species in the table below are not exhaustive and is a guide only.

Proven compatible species at Taronga Zoo

| | |
|--------------------------|-----------------------------|
| Victoria-Crowned Pigeons | Eclectus Parrots |
| Nicobar Pigeons | Palm Cockatoos |
| Blue-faced Honeyeaters | Grey Shrike Thrush |
| Eastern-yellow Robins | Olive Backed Oriole |
| King parrots | Channel-billed Cuckoo |
| Eastern Whipbird | Rainbow Lorikeet |
| White-browed Babbler | Black-breasted Button-quail |

7. Feeding Requirements

7.1 Captive Diet

The staple diet can be fed in a regular small 20cm round dish and placed in dry location on the floor of the aviary. Noisy Pitta are an opportunistic omnivore and consume a wide variety of food items in captivity. At Taronga Zoo the daily maintenance diet consists of equal proportions of insectivorous diet, frugivore diet and carnivore diet. See appendix 2 for specific dietary requirements. See category 8 for specific dietary requirements for breeding birds.

7.2 Supplements

Mineral and vitamin supplementation is not required under normal circumstances if appropriate diets regimes are followed.

7.3 Presentation of Food

Insects can be fed by scattering them widely over leaf litter. Snails are an important dietary item and are consumed in preference to all other food items at Taronga Zoo.

8. Breeding

8.1 Breeding System

Species has not been researched significantly in the wild. Nests have been discovered in much the same locations as for captive birds EG roots of trees, in between rocks etc. Incubation for Noisy Pitta is unrecorded in the wild. It is thought that Noisy Pitta is Monogamous in the wild, certainly in captivity male and female

exhibit behaviours consistent with this observation.

8.2 Age at First Breeding and last Breeding

In captivity Noisy Pitta have been recorded as breeding successfully at 6 months of age. It is not known if this is a captive phenomenon, however this would seem consistent with the breeding biology of other passerine species. It is likely that in captivity Noisy Pitta would breed until the end of their natural life expectancy.

8.3 Ability to breed every year.

Noisy Pitta have been recorded as breeding each year in captivity at Taronga Zoo.

8.4 Timing of Breeding

Noisy Pitta exhibit breeding behaviours dictated by seasonally factors which are recorded as between October and April in the wild, which corresponds with observations in captivity.

8.5 Ability to breed more than once per year

In captivity Noisy Pitta have been recorded at Taronga Zoo to have up to 5 clutches in one breeding season. It is not understood whether this is dictated by the availability of a type of food during this period, however it would be likely that this would effect the success of each breeding event.

8.6 Nesting

In the wild Noisy Pittas normally build a nest between buttress roots at the base of Rainforest trees or in between rock fishers. At Taronga Zoo they have also nested in

wooden nest boxes 1.5m above the ground (see appendix 4), In the centre of a birds nest fern *Asplenium sp.* and on the Aviary floor, favouring terraced corners or the base of trees. The more secluded the better. The nest is a dome structure approximately 300mm in diameter with a small entrance and a ramp composed of sticks and often with a "dung doormat" or mud patio. The exterior nest chamber is composed of sticks and bark. The inner chamber is lined with fine grasses and

tendrils. The Male only has been reported to construct the nest Parrish, 1983.

8.7 Dietary Changes Prior To Breeding

Additional leaf litter should be provided in late September just prior to the breeding season, and an increase the amount of insects for example, Moths, Locusts, Crickets, Cockroaches, Snails Mealworms, Wax Moth Caterpillars and Stick Insects etc.

8.8 Dietary Changes While Breeding

Increase the amount of live insect food as the demand increases. At Taronga Zoo Noisy Pittas are fed a Wide variety of food items in the breeding season, these include baby mice, Moths, Locusts, Crickets, Cockroaches, Flies and Pupae, Snails Mealworms, Wax Moth Caterpillars and Stick Insects etc.

8.9 Incubation Period

The incubation period for the Noisy Pitta has been recorded at Taronga Zoo as Fourteen to sixteen days.

8.10 Clutch Size

Three, rarely four eggs are laid per clutch, with the average being two. The inter clutch period has been recorded at Taronga Zoo at 20 days.

8.11 Fledging Period

After fledging chicks are brooded only at night. Sole Parent may be dedicated to incubation and the raising of the young. The chicks leave the nest at fifteen to twenty days. Chicks have been recorded being independent at Thirty-two days (Parish *per com* 83).

8.12 Egg Weights and Measurements

A number of eggs have been measured at Taronga Zoo with the average being 33mm x 25mm Beruldsen, 1980 and weighs on average 16 grams tz.

8.13 Developmental Notes

Noisy Pitta chicks have standard passerine development characteristics. The major physiological milestones are pinfeather emergence and opening, eyes opening, leaving the nest, weaning. At the onset of each of these stages there is often a corresponding plateau effect against weight gain, which lasts for less than 24 hours, but is noticeable when weight gain is graphed.

8.14 Age of Removal from Parents

Noisy Pittas will usually begin to nest before the previous chicks are fully independent. It is advisable to observe the chicks carefully to ensure that they are eating enough food before they are removed from the dam and sire. Generally no aggressive behaviour is shown towards the young while the parents are incubating, however at Taronga Zoo we have observed both parents exhibiting aggressive behaviour towards their last clutch prior to the next clutch of eggs hatching. The chicks should be removed immediately to avoid injury or death.

8.15 Use Of Foster Species

Has not been used with this species and at this stage the technique is not required. It would seem feasible however, that Blue-winged Pitta *Pitta moluccensis* and the Rainbow Pitta *Pitta iris* would be an appropriate analogue and foster rearer.

9 Artificial Incubation and rearing

9.1 Incubator type

All modern commercially produced incubators would be suitable to artificially incubate Noisy Pitta eggs. At Taronga Zoo, we use Anderson Brown fan forced air models however, any type of incubator would be suitable provided that temperature and humidity parameters are consistent and that the interior has been disinfected between each batch of eggs.

9.2 Incubation Temperature and Humidity

Dry bulb = 38 c and wet bulb = 35 c

9.3 Desired % Weight Loss

No information available, however it is likely that 16% would be the approximate weight loss consistent with other birds species requirements in a range of genera.

9.4 Hatching Temperature and Humidity

Dry bulb = 38 c and wet bulb = 80 c

9.5 Normal Pip to Hatch Interval

This is a critical period in the incubation process and keepers should monitor the progress of the chick and intervene if needed. Normal pip to hatch period would be in the range of 24 TO 30 Hours.

9.6 Brooder types and design

Human baby, humidity crib or a commercially bought bird brooder.

9.7 Brooder Temperature

The chicks must be transferred from the incubator to the brooder at the same temperature in which they hatched 38c, after which the temperature can be gradually reduced by degrees until the chicks are comfortable. Generally chicks will become restless and hold their wings away from their body when they are too warm, when cold they will become lethargic and cool to the touch. (This observation skill comes with experience). As the chick develops it generates its own body warmth, close monitoring is necessary to ensure that the bird does not over heat. The keeper must learn to gauge the right time to intervene as soon as required.

9.8 Rearing Diets

Noisy Pitta chicks have been raised on a diet of chopped baby mice, paw-paw, carnivore diet and insects including mealworms, Locusts, Crickets and Moths.

9.9 Frequency fed

| | | |
|-------------------|--------------------------------------------------------------------|---------------------|
| 0 – 12 hours old | Every one and a half hour | Between 6am and 8pm |
| 12 – 24 hours old | Every one and a half hour | Between 6am and 8pm |
| Day 1 – 6 | Every one and a half hour | Between 6am and 8pm |
| Day 7 – 13 | Every one and a half hour | Between 6am and 8pm |
| Day 14 – 21 | Every 2 hours | Between 8am and 4pm |
| Day 22 – 28 | Every 4 hours | Between 8am and 4pm |
| Day 29 | <ul style="list-style-type: none"> • 1 feed per day | |

- At this stage the chick would be close if not already weaned. At this stage it is essential that weights be closely monitored. Hand feeding should resume if the weight drops below 80grams.

9.10 Feeding method

Tweezers are the standard utensil for feeding Noisy Pitta nestlings. Normally the feeding response is strong and the chicks beg with the beak wide open displaying their characteristic orange gape. Young birds will loose interest in feeding after just one swallow it is hard (and not good practise to force them) to feed more food after they have done this. It is therefore essential for the first piece of food to be of a good size, but still smaller enough for the chick to swallow easily. As the chick develops it will gain strength and beg progressively more vigorously and consume more food each day. After each feed the chick will produce a faecal sack which should be removed from the 'nest' container.

The individual pieces of food offered should be about 1.5grams in weight and approximately 1 quarter of a centimetre square. This can be increased as the chick develops and is capable of swallowing larger food items.

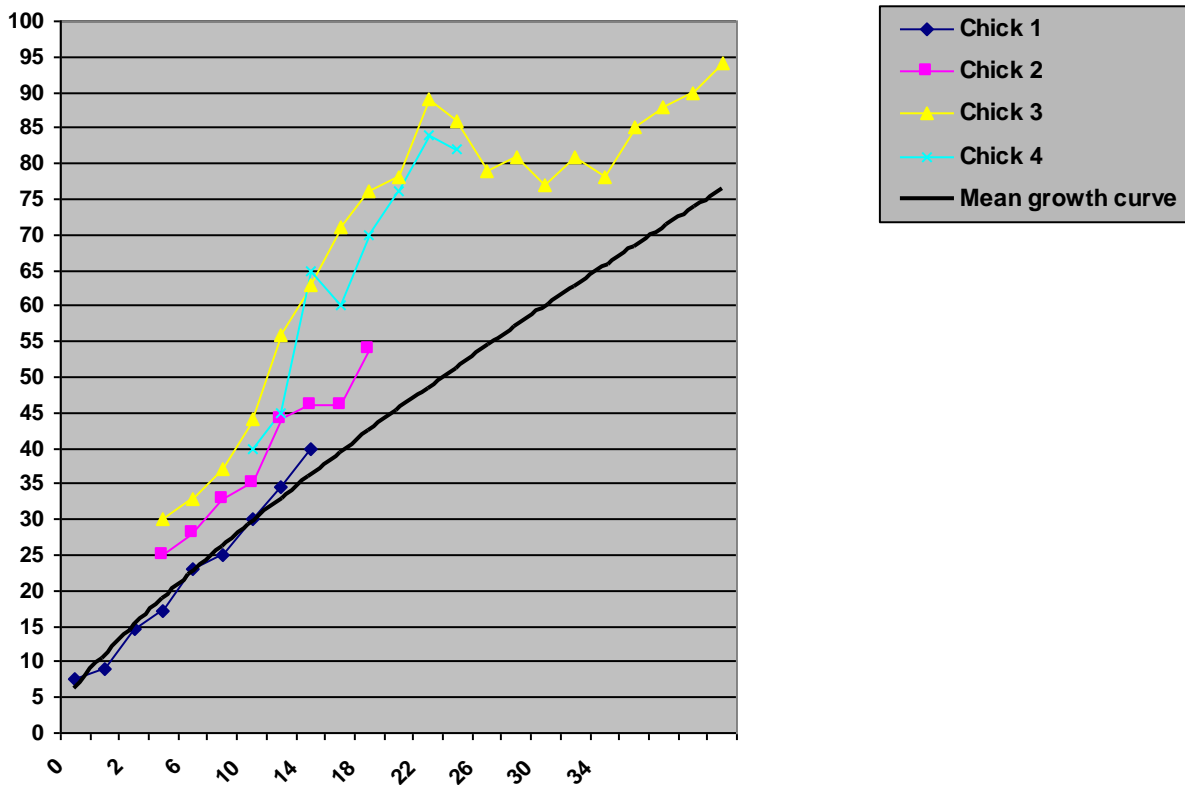
Amount fed

| | | |
|-------------------|---------------------------|--------------|
| 0 – 12 hours old | .5ml electrolyte solution | At each feed |
| 12 – 24 hours old | 2 x 1.5grams | At each feed |
| Day 1 – 6 | 6 x 1.5grams | At each feed |
| Day 7 - 13 | 8 x 1.5grams | At each feed |
| Day 14 – 21 | 10 x 1.5grams | At each feed |
| Day 22 – 28 | Until feed response stops | At each feed |
| Day 29 | Until feed response stops | Once per day |

A variety of food items should be alternated randomly from the selection listed in 9.8.

9.10 Chick growth rates

Weight gains in artificially reared Noisy Pitta *Pitta versicolor*



9.12 Special requirements

Pittas produce extremely large faecal sacks, which in the wild are removed from the nest by the parents. During the rearing process keepers should be aware that the

chick may seem uncomfortable passing what is often up to 8% of their body weight of faecal deposit. This is however a normal behaviour.

The nest substrate need not be elaborate. A plastic bowl with a tissue lining covered by twigs is adequate. The tissues should be replaced at each feed and the twigs every couple of days. The twigs allow the growing nestlings to use the medium to exercise feet and probably reduce the likelihood of splayed legs.

9.13 Identification methods

If more than one chick is being reared it is important to be able to identify individuals for the purposes of recording behavioural and physiological information. The easiest method is to use plastic leg bands. The chicks can be banded with a loose fitting band immediately after hatching and these can be changed easily as the bird develops and outgrows the band. Additionally a marker pen can be used on the feet of claws, which are orange. Pitta chicks are naked and completely black unlike most other altricial passerine chicks and this makes colour marking the head or body difficult to see.

9.14 Weaning

Weaning should start any time between day 14 and day 21 depending on the individual, 16 days being the average. Every effort should be made to encourage the chick to start to eat independently. Weaning can be a stressful period for passerines and weight loss must be monitored carefully during this period. At Taronga Zoo we start introducing the chick to adult food at 18 days and in addition insects are scattered in front of the chick to further encourage self-feeding. It has been observed that the chicks respond quickly to moving insects and they will attempt to eat them almost from the outset, however it takes a few days before they can sufficiently coordinate their movements to kill and consume them. A weaning period to complete independence has been recorded as 30 days at Taronga Zoo.

9.15 Rehabilitation

Protocols for the rehabilitation of Noisy Pitta has not been documented.

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