HANDREARING SOFTBILLS
BY GLEN HOLLAND

Hatching: Stop turning at the first internal pip and move to the hatcher at the same temp as the incubator.

Nest Lining: Chicks need to be kept on a suitable substrate, which will ensure they remain warm, and comfortable. The bedding needs to be absorbent to ensure the chicks remain clean and dry. It should also offer traction to avoid the chick slipping, which could result in splayed legs. The material should not be dusty as this could lead to respiratory problems and an irritation of the eyes as well. The chick should, particularly in the early stages, be comfortable. Very often paper towels and tissues are used in the early stages with the chicks being moved on to pine shavings as they mature. One problem experienced with pine shavings is that some species will consume these resulting in compaction. For example a clutch of yellow-billed hornbills, which I was rearing, suddenly stopped feeding. After a few hours they regurgitated pellets of shavings. They were then placed on a bed of dry grass and feeding resumed as normal. Chicks of larger birds such as raptors and ibis should be placed in a container, which is lined with twigs with a grass and leaf bedding on which the chicks can rest. Without this coarse bedding, these chicks may develop deformities in the legs and feet.

First 24 hours:

Diets:

Insectivore/Frugivore/Nectivore (eg Bellbird):

Do not feed solids for first 3 hours. Start with Ringers lactate hourly and then progress on to solids.

30%	Insects
30%	Commercial hand rearing formula
20%	Ox heart strips
20%	Fruit – papaya (best, banana, apple etc)

Insectivore/Carnivore (eg kingfisher):

Initial 3 hours as above.

1/3	Insects.
1/3	Diced ox heart or pinkie mice if available.
1/3	Commercial rearing formula (if not available used beef flavoured tinned dog food).

Initially only the soft bodies of diced insects are fed but gradually the harder body parts are included until fledging at which time the bird should take a whole crushed insect with only excess exoskeleton such as legs on a cricket removed. When cutting ox heart do not remove most but not all the fat. Growing birds require some fat.

Feed schedule: example for stitchbird

FEEDING SCHEDULE

SPECIES:

Date	Time	Items fed	Comments
		M = mealworm, Wom = wombaroo, G = gastrolyte	**Wgt:** **%gain:**
18/11 Chick A	1515	½ drop G	Chick A weight = 2.33g. Chick A on its back 'paddling' in the air.
	1535	Pinhead of mealworm gut soaked in G	
	1615	Pinhead of mealworm gut soaked in G	
	1700	G	
	1710	Small piece cricket gut, G	Chick A sitting upright, beak open.
	1750	Small piece waxmoth, G	
	1830	Small piece mealworm, G	Support back neck Chick A with fingers.
	1840	Small piece mealworm, G	Chick A a little stronger.
	1930	Small piece cricket, G	Chick A no faecal yet.
	2045	Small piece waxmoth, G	Chick A no faecal yet.
	2145		Chick A not fed - no faecal.
Chick B&C	1850		Chick B marked with black, weight = 2.14g Chick C weight = 2.28g, moved into brooder.
	1940	Each given ½ mealworm gut, G	Chicks B & C took it ok.
	2045	Each given ½ M gut, G	
	2150	Each given ½ M gut, G, Wom	
19/11 Chicks A+D	0545		Chick D moved into brooder, weight = 2.11g.
	0550	Chick A given 2 x ½ M gut, G, Wom Chick D given ½ M, G, Wom	Chick A produced first faecal.
	0625	Each given ½ waxmoth, G, Wom	Chick A produced faecal.
	0700	Each given piece cricket, G, Wom	
	0800	Each given ½ mealworm, G, Wom	Chick B produced faecal before 0730
	0840	Each given ½ mealworm, G, Wom	

	0855	Chick D fed gut of P.moth, Wom	Chick A not fed. Temp = 35.2°C , RH = 72%
	0940	Each given P.moth gut, Wom	
	10.15	Each given waxmoth, G, Wom	Chick A produced faecal. Chick D produced first faecal.
	1025	Fed drop of G, Wom with syringe	Chick A looks a little dehydrated.
	1120	Each given heart, G, Wom	Not good.
	1205	Each given P.moth only	Not good. Chick A weight = 2.4g (+0.11g) +5% Chick D weight = 2.3g (+0.19g) +10%

Forceps Tweezer:

In my work with species such as softbills and raptors I discovered just how useful forceps are. Forceps are used to feed the more bulky foods such as insects, pieces of diced heart and fruit. Not only can the food be firmly held but prior to feeding it is easy to dip the food into a little water or moistened rearing formula. A quick pinch with the forceps tweezer not only kills insects but also pulverizes it as for example, a parent kingfisher naturally would. As a rule those species which are fed with a forceps do not require the food warm. Feeding can be as quick as the feeder can operate.
Some speed is sometimes required to avoid the chicks, for example hornbills, taking out their frustration on their siblings. It is however also necessary when feeding with a forceps to be careful of chicks rushing forward and puncturing the lining of the gape on the tip of a forceps.

Whatever instrument is used, it must be absolutely clean. After being washed in hot soapy water the instruments must either be boiled for at least 15 minutes or else left to soak and be disinfected in Hibitane, Virkon, MicroDet or another brand of anti bacterial, fungal and virucide, solution. Remember also that we, the feeders of these chicks also carry pathogens on our hands, which should be well washed before feeding commences.

Sibling compatibility:

It is important to ensure that the siblings being reared are compatible. Here one of two problems can result in the siblings having to be separated into individual containers. Firstly if there exists a large size difference, the smaller chick will be stood on and possibly even squashed to death. Secondly some species such as bee-eaters, kingfishers and hornbills are extremely aggressive towards their siblings and it may be necessary to separate them to the point where all the birds are feathered after which aggression subsides. With most large raptors and some other species such as ground hornbills and wattled cranes, this sibling aggression lasts for up to two months.

Weaning:

Once chicks begin to flap and climb, in favorable climates, they can be moved into outside fledgling cages - on warm days and inside again at night until they have adjusted to the new environment. Never put a hand raised chick in a big aviary straight off. It needs to be trained in a fledging cage first. After a few days in the cage, hand feeding is gradually reduced as the chicks begin to sample food on their own. This period may be as little as ten days or as much as six weeks. It is important during the fledging period to ensure that the chicks do not loose too much weight.