

Handling, Husbandry and Clinical Conditions of the Budgerigar

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Abstract: This essay intends to improve readers understanding of the requirements for health of the budgerigar, due to the increasingly concerning issue of the species' average lifespan. Despite the fact that most budgerigars can be expected to live up to 10-12 years in captivity, the majority of cases see these birds only surviving between 5-10 years. In Germany especially, over half of those kept in captivity are reported not to be reaching even 5 years of age before poor health takes over, and these health issues stem from inadequate knowledge of required conditions and nutrition. It is hoped that the collation and detailed explanation of research information covering all required aspects of budgerigar care will ensure keepers of this species are better informed on their animals' needs, and ultimately reduce the rate of premature and unnecessary deaths.

Keywords: Budgerigar, Handling, Husbandry and Clinical Conditions.

I. INTRODUCTION

Originating from Australia, the budgerigar belongs to the Psittaciforme taxonomic order (Dallas & Jewell, 2014). As an exotic species, the *Melopsittacus undulatus* (Wildpro, n.d), has some very specific requirements for life, which if appropriately met can allow them to live out a potential life span of between seven and twelve years (Doneley, 2011). This essay examines these requirements with regards to handling methods; husbandry relating to optimal housing, behavioural tendencies and nutritional requirements; and the specific clinical conditions of Scaly Beak, Goitre, and French Molt.

II. HANDLING

Budgerigars are small and fragile animals, usually within a weight range of around 35- 45 grams when fully fledged (Doneley, 2011). Therefore, they must be very carefully handled in order to preserve their health. It should be remembered that although budgies can be tamed and eventually develop a very good relationship with owners with regards to being handled, they can also become easily stressed which can lead to biting and aggressive behaviours (PetsWorld, n.d). However, if time and care is taken to build trust between the bird and owner encouraging them to grow used to handling from a young age, they can become very docile and friendly (Pollock, 2012). It is essential that this development of training is only attempted by one person consistently, as the introduction of multiple unfamiliar handlers will lead to the bird feeling stressed and overcrowded (PetsWorld, n.d). Prior to handling a budgerigar, any potential escape points should be secured such as doors, windows or vents (Eatwell & Taylor, 2014). This will prevent any injuries to the animal occurring from attempting escape, and in the authors opinion will create a less stressful atmosphere overall as the handler will have increased peace of mind, benefitting both bird and handler. Eatwell and Taylor (2014) further advise that a surrounding environment of dimmed lighting and reduced noise can help allow for a calmer initiation of handling. Also, the handler may wish to consider covering of the hands with a cloth or towel in order to reduce risk of bites, infection and contamination. A towel may also be placed over the bird for initial capturing, (Hoppes 2016), as if the bird is used to this method it can reduce the level of stress they are placed under. If restraint must be used in a veterinary practice for clinical examination or procedure then it may be useful to have the owner present, as presence of a familiar

figure may help ease the birds' nerves (Eatwell & Taylor, 2014). Where such restraint is required there are several possible methods, one of which is the 'Ringer's Hold', where the birds head is immobilised between the thumb and index finger, and the fingertips are used to hold the back of the head. The rest of the fingers restrain the wings and body (FAO, n.d). Time taken for any restraint method should be minimised as it is not unheard of for a sick bird to die due to additional stress from restraint (Doneley, 2011).

III. HUSBANDRY

A. Housing:

The budgerigar should be housed in a stainless-steel wire or mesh cage of minimum dimensions 20 inches length by 20 inches breadth by 30 inches height, with bars spaced at least 0.5 inches apart, hence allowing for comfortable outstretching of the wings, natural movement and posture (Hoppe, 2016). Stainless-steel is used as it is sturdy, secure, and often powder-coated to prevent rusting (Van Sant, 2010). Dallas and Jewell (2014) advise situation of cages away from drafts or direct sunlight, as birds do not have sweat glands, leading them to attempt temperature regulation through behavioural mechanisms which can cause extreme stress. A variety of different toys such as tunnels and swings should be provided for environmental enrichment and stimulation, alongside perches of diameters between 3/8-3/4 inches in order to remain comfortable for the birds' feet and posture (Pollock, 2012). This is because as Psittacine birds they have zygodactyl toes (Botelho, Smith-Paredes, Nunez-Leon, Soto-Acuna & Vargas, 2014). Covering perches with sandpaper can cause abrasions/sores to develop on the birds' feet (Dallas & Jewell, 2014), and should hence be avoided. Dishes of fresh water should be provided to allow daily bathing, however if the bird appears not to favour bathing they may be sprayed with a light mist of water. This is known as 'misting', and the bird shouldn't be sprayed directly, but rather have the vapour sprayed above them and allowed to mist down onto the plumage. Alternatively, a bunch of wet lettuce leaves may be provided for the bird to rub into and maintain feathers this way (Association of Avian Veterinarians [AAV], 2016). Typical housing of singular or small numbers of budgerigars in one cage is referred to as 'Kitchen-housing' (Boseret, Losson, Mainil, Thiry & Saegerman, 2013), and any more than a few birds should then be upgraded to a larger aviary to allow for an acceptable amount of space and comfort. This is strongly advised as overcrowding in cages creates intense stress for the animals due to competition for space, food, and territory (Heatley & Cornejo, 2014). The risk of disease spreading and infection susceptibility will also increase, and in the authors opinion this stress could even result in stereotypic behaviour.

B. Behaviour:

It is important to have knowledge of normal behaviour in order to recognise any health problems or signs of discomfort. According to Jordan (2013), a contented budgerigar will display behaviours such as singing or whistling, beak grinding and preening. As previously mentioned, the budgerigar is a social animal and, if the effort is made to do so on the owners' part, will develop a close relationship with its handler. English breeds are thought to be slightly tamer and more docile in nature than those of American descent (Pollock, 2012), but Netherton (2014) states overall the species is very suitable for inexperienced owners due to their generally mild demeanour. As a result of this social nature, consideration should be taken as to whether they will be housed in pairs or groups, as they would naturally reside in large flocks (Lambeth, 2010). They can be a rather playful, active species, and Dallas and Jewell (2014) mention that their zygodactyl foot gives them a tendency to climb, rather than perch as a passerine species would. They should hence be provided with enough stimulation and opportunity for activity through appropriate toys, and a substrate supportive of their natural desire to forage, such as shredded newspaper (Pollock, 2014). It should be noted that some toys which are, concerningly in the authors view, readily available in commercial stores can be poisonous to avian species, due to their heavy metal toxicity. Medlin (2014) advises that if stated to contain zinc or lead then it should be avoided in order to prevent risk of this. Medlin (2014) also states that some toys such as mirrors, boxes/tents, or any structure that could imitate a nesting shelter, can stimulate avian hormones, leading to behaviours such as territoriality, egg-laying, and increased aggression. This influx in hormone production can be detrimental to the birds' health, especially in females. As fore-mentioned, if birds are housed in an inadequate environment, stereotypic behaviours may develop. Examples of stereotypy in females can include behaviours such as wire-chewing or screaming/screeching, and in males can present as pacing and pecking obsessively at one spot (Polverino, Manciooco & Alleva, 2012). Owners must take action to improve conditions as quickly as possible if these behaviours are observed.

C. Nutrition:

Appropriate nutrition is crucial for the health of budgerigars. They are a hard-billed species, and fall under the category of granivores (Wilson, 2010), meaning they will eat a mainly seed-based diet. Fresh fruit and vegetables will also be well-accepted, alongside greens like dandelion and chickweed to provide more variety and nutrition, although these should be given in moderation to prevent gastrointestinal issues (Dallas & Jewell, 2014). Seed mix must be labelled as a 'complete' food in order to provide all essential nutrition, as these mixes often have additional mineral supplements such as iodine and calcium. Resultantly, commercial food mixes are encouraged ahead of owners preparing their own mixes, as the required component ratios are difficult to attain (Provet, 2013). This will help reduce prevalence of the iodine deficiencies commonly seen in this species, and consequently help avoid nutritional and thyroid related conditions including goitre. Provet (2013) also warns that cereal seeds such as wheat and oats are nutritionally better for avian species than oily seeds like sunflower seeds, as oily seeds have a much higher fat and energy content. Excess of these in the diet can lead to obesity, an already common issue in budgerigars. Birds of this species are known to have a basal metabolic rate similar to that of some mammals, however when active this increases drastically (Ehrlich, Dobkin & Wheye, 1988). Consequently, nutritional requirements will vary dependant on environment and activity level, but generally, psittacine birds require roughly 3200 calories a day, per kilogram of body weight. These requirements will increase during moulting and laying periods (Provet, 2013). Dallas and Jewell (2014) advise provision of cuttlefish as a calcium supply, for the bird to gnaw on. This will also keep the beak healthily maintained. Approximately 4ml of fresh water per day is required (McDonald, 2013), which should be supplied in drinkers, while seed and fresh food mixes should be offered in bowls. Owners should ensure not to situate these bowls beneath perches, as food supply will be contaminated with droppings and feather dust (Pollock, 2014), potentially leading to health issues.

IV. CLINICAL CONDITIONS

Heatley and Cornejo (2014) state the majority of health issues in budgerigars not stemming from infection occur due to poor husbandry and nutrition, so it is imperative that owners be aware of their birds' requirements and willing to provide these, in order to avoid poor health. Particular diseases which can be problematic for this species include: Scaly beak, goitre and French molt.

A. Scaly Beak:

Scaly beak is an external parasitic disease caused by the *Cnemidoptes* mite eating cell debris (Girling, 2003). Symptoms displayed can include swollen legions and disfiguration of the beak, legs, feet and cloaca (Burgmann, 1995). Burgmann (1995) advises treatment by applying mineral oil to these legions, and Girling (2003) agrees, stating that this can loosen and relieve the bird of these legions, and block the mites air holes, killing them off by suffocation. Owners can prevent against this condition by practicing good sanitation of cages and other related equipment (Girling, 2003).

B. Goitre:

Goitre is a crop associated disease, clinically presenting as very similar to crop disease. It is usually consequential of a diet nutritionally un-supportive of species requirements, based solely around seeds and un-supplemented (Girling, 2003). According to Butcher and Beck (2015), this condition can also be known as Thyroid Hyperplasia/Dysplasia, and is the most common thyroid disease in Budgerigars. It stems from an iodine-deficient diet leading to low levels of thyroxine, so follicular epithelial cells which produce thyroxine are signalled to do so excessively. Thyroxine is a thyroid hormone which regulates metabolism and so is especially important due to avian species having such a high metabolic rate (Schmidt & Reavill, 2008). The thyroid gland then becomes enlarged as not enough iodine is supplied (Butcher & Beck, 1995), and hence puts pressure on the crop and oesophagus, causing respiratory difficulties (Girling, 2003). Clinical signs can include lethargy, mouth-breathing, and some regurgitation/expulsion of consumed seed. Butcher and Beck (2015) state that iodine supplementation is the recommended treatment, and prevention can be achieved through addition of one drop of diluted Lugol's solution to 1 oz. of fresh water, once a week.

C. French Molt/Polyomavirus:

French Molt is a disease resulting in atypical feathering, and is extremely prevalent in fledgling budgerigars with symptoms becoming apparent at 5-6 weeks. These can include moulting to excess, feather breakage, bruising, bleeding, and even death of chicks (Butcher & Miles, 1993). Extremity of feather loss is dependent on severity of the case, and the

most acute can lead to feathers being lost almost completely. Consequently, most suffering birds cannot fly and thus earn the name “runners” (Butcher & Miles, 1993). One proposed cause of this condition regards dietary nutrition, as a deficiency in the essential amino acid methionine can cause deterioration of feather condition (Macwhirter, 2013). Furthermore, although not strictly determined causes, Butcher and Miles (1993) list several known influences on the conditions onset, including stress from abnormal breeding patterns, poor sanitation, or owners choosing birds based on appearance rather than considering health or medical history of that particular strain. This is not a zoonotic disease and therefore cannot be transmitted to humans or other mammals, however as a form of polyomavirus it can be transferred between birds through contaminated feather or faecal matter (Richie, n.d). Despite no specific treatment being established, there are several preventative measures, including avoidance of contact with other birds, good sanitation and air circulation, and vaccination to reduce susceptibility (Richie, 2014). Richie (2014) also advises the use of certain immune system stimulants which could help fight the infection.

V. CONCLUSION

Overall, the health and happiness of this species should be paramount when in a domestic environment, and a knowledge of the specific requirements regarding optimal housing, handling and nutrition, will allow for avoidance of many husbandry related health conditions. Therefore, despite the complexity of these needs, it should be the main concern of the owner to ensure they are met in order to derive the very best experience for both themselves and the animal.

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