

“Pulmonary Hypersensitivity Syndrome”

RESPIRATORY DISEASE IN SOUTH AMERICAN SPECIES ESPECIALLY MACAWS AND CONURES

Although good ventilation is necessary for any type of bird, it is especially critical for South American species. Blue and Gold macaws, as well as Sun Conures, seem especially sensitive to airborne irritants. Gradually they may develop a progressive respiratory disease known as "pulmonary hypersensitivity syndrome" if housed in a poorly ventilated room, especially if kept with "old world" species that produce a great deal of powder: Cockatoos, Cockatiels, Lovebirds, or African Grey Parrots.

This powder in Old World species is produced by specialized "powder down feathers" and is a white waxy substance composed of keratin. Powder down forms a water proof barrier for contour feathers. The down is composed of very fine particulate matter which becomes airborne very easily and spreads via air currents and air ducts throughout the area. This powder with its protein composition is very irritating to the respiratory tract of South American Species.

The powder down can also cause irritation to people with respiratory problems and allergies. People with allergies may be able to tolerate these old-world bird species, but they should be aware of this before acquiring one of these dusty species. In the **early stages** of pulmonary hypersensitivity syndrome, the bird may appear normal, but only wheeze when excited. In a **later stage**, dyspnea (difficulty in breathing), a cough, and a bluish tinge to the facial skin (cyanosis) can develop. Hypoxia or under oxygenation of tissues leads to an increase in the number of circulating red blood cells (RBC) termed Polycythemia as well as an increased viscosity in the blood so that it does not flow normally. Subsequent immuno-suppression may lead to Aspergillosis, a deadly respiratory fungal disease.

Clinical symptoms, blood work, and high resolution digital radiographs may support the diagnosis, but a lung biopsy is necessary for confirmation.

In order to prevent this, South American Species should be housed in well ventilated rooms without Cockatoos, Cockatiels, Lovebirds, or African Grey Parrots. An air cleaner with a HEPA filter is highly recommended. Unfortunately, this pulmonary disease is often advanced when owners first notice the problem and finally get diagnosed by a trained avian veterinarian familiar with this syndrome. Certain drugs may provide temporary relief. **There is no cure for this syndrome**, but with removal of the allergen and clean air there can be a marked improvement.