

THE EFFECT OF QUARANTINE ON THE HEALTH OF IMPORTED PIGEONS AND ITS RAMIFICATIONS FOR AUSTRALIA AND AUSTRALIAN PIGEON FANCIERS

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Since 1989 several hundred pigeons have been legally imported into Australia each year through the AQIS facility at Spotswood in Victoria. Much has been said and written in lay pigeon circles about the effect of the importation process and quarantine procedure on the health of imported birds. The quarantine process has a number of potential stressors. The pigeons are confined to small cages for many weeks. Day length, temperature and humidity are artificially controlled and the birds are submitted to a variety of diagnostic procedures including blood collection. They also receive a range of medications.

The opportunity to evaluate two imported birds health presented itself in 2010 when a friend imported two birds from the UK and IDEXX laboratories offered to run two complete blood profiles for no charge. The birds were collected from the Spotswood Quarantine Facility in Melbourne, placed in an empty cardboard box and transported directly to the Melbourne Bird Veterinary Clinic. On arrival, they were thoroughly examined. A crop aspirate and fresh droppings were collected from each bird and examined microscopically. Blood was collected from both birds and forwarded to IDEXX for complete biochemistry and haematology. Blood was also forwarded to another lab for PCR testing for *Chlamydophila SPP.* and Circovirus.

On examination, the birds were in generally good condition. Lice, however, were visible on the flight feathers. Microscopic examination of the crop flushes of both birds showed large numbers of trichomonads, while microscopic examination of the droppings revealed two to three coccidia eggs on each x100 microscope field. The biochemistry and haematology profiles were all totally normal. The tests for pigeon Circovirus and *Chlamydophila spp.* were negative in both birds.

From this small sample of two, it is hard to draw too many conclusions but if we extrapolate these results to the import consignment generally it appears that the birds coped quite well with the importation procedure, with both birds being in good condition, with normal blood profiles. It was, however, interesting to note that the birds were infected with trichomonads, coccidia and lice.

A further opportunity to evaluate the health of recently imported birds presented itself in March 2011. A client presented six imported birds for examination. They had been collected from the AQIS import facility at Spotswood seven days before.

One bird (a blue bar hen), had a swollen right elbow while a second bird (a dark check hen) had an altered sensorium and was ataxic. The owner had noticed these changes immediately on collecting the birds from quarantine and had contacted the department that day. Since collection the birds had been held in isolation in an immaculate loft specifically prepared for their arrival.



The imported BBH (BELG 10 3047123) with a swollen joint

On presentation a crop aspirate and fresh droppings from each bird were collected and examined microscopically. The crop flushes contained large numbers of trichomonads while the droppings contained large numbers of coccidial oocysts. The symptoms displayed by the birds (swollen joint, ataxia, altered sensorium) although not specific were extremely suggestive of paratyphoid (*Salmonella* spp. infection). The right wing of the blue bar hen with the swollen joint was radiographed and showed an increased radiodensity of the distal humerus. A fine needle aspirate of the right elbow joint was collected. The aspirate yielded approximately 0.25ml of purulent synovial fluid. This was forwarded to Idexx

laboratories for microscopic examination, culture and sensitivity. Specific enrichment media were requested because of the suspicion of a salmonella involvement. Whilst waiting for these results the coccidiosis and trichomoniasis were treated with toltrazuril and ronidazole respectively. The birds were also started on oral enrofloxacin. The joint aspirate failed to identify or grow any bacteria. While the culture was proceeding the birds continued with their enrofloxacin treatment and clinically improved. The blue bar hen's affected joint became less red and swollen while the dark checker hen's general function improved. A letter explaining the results of the veterinary examination were forwarded to the Live Animal Imports Department at AQIS, who replied:

"The role of quarantine is to prevent the introduction of diseases that are not already present in Australia. All of Australia's animal import policies are based on the requirements of the World Trade Organisation Agreement on the application of Sanitary and Phytosanitary Measures (SPS Agreement). This means that Australia cannot impose import restrictions for diseases that are already present in the country or for diseases that do not cause significant problems. The diseases mentioned in the veterinary report (trichomoniasis, coccidia (sic) and salmonella (sic) (some strains only) are all already present in Australia. Testing was undertaken on these pigeons to ensure the *Salmonella* strains were not those that aren't currently found in Australia. The exotic strains of *Salmonella* of quarantine concern (*gallinarum*, *pullorum* and *enteritidis*) were all excluded during this additional testing."

"AQIS will not prescribe screening for endemic diseases to allow import of animals. Owners are able to organise additional testing (at their own expense) for any endemic diseases they are concerned about introducing in to their flocks."

"*Salmonella* was identified in this shipment of birds and typed to the endemic serotype of *Salmonella* Typhimurium. As this strain is already present in Australia, the consignment was released. "

This case raises several concerns. Although *Trichomonas* spp. and *Eimeria* spp. occur in pigeons in Australia, the isolates of these organisms carried by these imported birds were those from the other side of the world with unknown pathogenicity and drug sensitivity. It was also concerning that birds with lesions consistent with active paratyphoid were released from quarantine. *Salmonella* Typhimurium also occurs in Australia but many different strains occur. In Europe, in pigeons, the disease paratyphoid behaves very differently than in Australia. In Australia the disease is uncommon in well cared for racing pigeons. In Europe however the disease is extremely common and is a major cause of poor race performance with many veterinarians recommending regular treatment through the racing season. Also in Europe (but not in Australia) a preventative vaccine is available which is routinely used by the majority of fanciers to protect their birds because of the severity of the

problem. It is not unreasonable to assume that the negative culture results do not rule out the disease's presence but more likely are the result of the doxycycline course given to the birds during quarantine as a treatment for chlamydiosis that may also have treated any concurrent salmonella infection. Without a culture there was no way of telling whether the disease was still active and it could be regarded as good fortune rather than good planning, given the bird was still showing clinical disease, that a potentially exotic strain of *Salmonella* Typhimurium was not introduced into this country. The approximately 167 birds in this shipment have been spread Australia wide. The potential for disease transmission is obviously very high.

The release of birds from quarantine carrying endemic disease raises two further issues.

The first issue is the general perception among fanciers that birds coming from quarantine are disease free. This, it appears, is not the case. AQIS guarantees only that the birds do not carry diseases that are exotic to Australia. The birds on leaving quarantine could therefore be carrying diseases that are already in Australia but are not in the importing fancier's loft. In the latest shipment birds were shown to be infected with trichomoniasis and coccidia and were showing symptoms consistent with paratyphoid. In an earlier shipment birds were also shown to be infected with trichomoniasis and coccidia. This means placing birds directly from quarantine into a fancier's loft can introduce disease that may in fact make the fancier's birds unwell. This is not widely known and perhaps more effort should be made to make fanciers aware of this. Because of this it would obviously be wise for fanciers to have their birds checked by an avian veterinarian prior to introducing them into their loft.

The second issue involves animal welfare. It is perhaps concerning that birds during quarantine could have identified disease go untreated, that may be making them unwell, if that disease was not exotic to Australia. It is always debatable how much suffering is caused by a disease but I feel that if an analogous situation occurred in a non -avian specie that it would be treated. For example if a dog in quarantine became unwell I feel it is likely that it would be treated whether its health problem was caused by disease that was either exotic or endemic to Australia.

Either way it is currently a good idea for fanciers to have birds examined by a veterinarian upon collection from quarantine.