

Methods for field recognition of individual Australian Pelicans *Pelecanus conspicillatus* from eggs to adulthood

Gregory R. Johnston^{1, 2, 3}

¹Vertebrates Section, South Australian Museum, North Terrace, Adelaide 5000, Australia

²School of Biological Sciences, Flinders University of South Australia, GPO Box 2100, Adelaide 5000, Australia

³Discipline of Anatomy & Pathology, School of Medical Sciences, University of Adelaide, 5005, Australia

Correspondence: Greg Johnston, Honorary Research Associate, Vertebrates Section, South Australian Museum, North Terrace, Adelaide 5000, Australia. E-mail: pelecanus85@gmail.com

Received: 23 September 2015

Recognition of individual animals is crucial to being able to answer many pure and applied research questions in zoology. Marking members of species that undergo large changes in size during development can be particularly challenging. This paper describes successful methods used to mark Australian Pelicans *Pelecanus conspicillatus*, which show mass changes of over two orders of magnitude during development. Re-sightings until the end of 2011 were recorded for birds marked between 1990 and 2003. Comparison of re-sighting rates among the different marking techniques used, their cost, practicality of application in the field and associated animal welfare issues were taken into account when choosing the best techniques. Marking eggs with non-toxic, felt-tipped pens worked well, except under wet conditions. Custom-made “velcro” wing tags worked well for nestlings. The “velcro” tags can also be used on the leg to mark small crèche-young until they are large enough for Allflex™ cattle ear tags to be used as patagial tags. The high re-sighting rates of patagial tags on fledged pelicans (>61%) demonstrated their superior utility compared with butt-ended, stainless steel leg bands (re-sightings 1.3%). Stainless steel leg bands detached from 22/311 (7%) pelicans concurrently leg-banded and patagially-tagged. The techniques described here were used sequentially to mark individual pelicans throughout their life span. They provide practical, cost-effective and safe methods for marking individual pelicans and other similar-sized birds.