VETERINARY CARE AND WHOLE BLOOD COUNT OF A JUVENILE BLACK-BROWED ALBATROSS *THALASSARCHE MELANOPHRIS* BEACHED ON THE COAST OF BRAZIL

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ABSTRACT

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We conducted an erythrocyte and leukocyte analysis for a juvenile Black-browed Albatross *Thalassarche melanophris* that was found beached at Maricá, Rio de Janeiro state, Brazil. The absence of data on this species was problematic in our unsuccessful rehabilitation. We present our findings here to assist future rehabilitations of other individuals of this species.

Key words: Black-browed Albatross, Brazil, hematology, rehabilitation, *Thalassarche melanophris*

The Black-browed Albatross *Thalassarche melanophris* has a circumpolar distribution, ranging from subtropical to polar waters in both the northern and southern hemispheres (ACAP 2009). Brazilian offshore waters are significant to many albatrosses and petrels of the South Atlantic Ocean (Vooren & Brusque 1999), but no hematological data have been published on this particular species. This provides a challenge to veterinarians faced with the rehabilitation of beached individuals. Therefore, we describe the hematological analysis of a Black-browed Albatross that was found beached on the coast of Rio de Janeiro state, Brazil.

TABLE 1
Results of hematological analyses for a juvenile Black-browed Albatross found beached in Brazil

	1st Sample	2nd Sample
Erythrogram		
Erythrocytes (10^6/mm^3)	1.8	3.83
Hemoglobin	12.7	11.7
PCV[a] (%)	38	35
MVC[b] (µm^3)	211	91
MCHC[c] (g/dL)	33	33
Leukogram		
Leukocytes (10^3/mm^3)	102.50	20.25
Heterophils (/mm^3)	3 895	12 352.5
Lymphocytes (/mm^3)	4 100	3 240
Monocytes (/mm^3)	512.5	227.5
Basophils (/mm^3)	1 845	2 430

[a] PCV: Packed cell volume
[b] MCH: Mean corpuscular hemoglobin
[c] MCHC: Mean corpuscular hemoglobin concentration

In July 2017, a juvenile Black-browed Albatross was found by the Santos Basin beach monitoring team at Itaipuaçu-Jaconé Beach (22°56′0.02″S, 42°30′28.48″W), Maricá, in the state of Rio de Janeiro, Brazil.

Clinical examination revealed its feathers to be soaked and impregnated with sand; cloacal temperature was 37 °C, respiratory rate was 18 breaths/min, and heart rate was 240 beats/min. The bird had a debilitated appearance, having viscous oral mucus, dull eyes, pale oral and cloacal mucosa, as well as watery blackish-green diarrhea. The bird was given water and electrolyte replacement (0.9 % NaCl solution), along with oral administration of 25 % glucose and an intramuscular injection of the quinolone antibiotic enrofloxacin (10 %, 20 mg/kg/d). Blood was collected at the start of treatment. Whole blood samples were placed in tubes containing an anticoagulant solution of sodium heparin. The erythrocyte, leukocyte, and differential cell counts were performed using the method described by Weiser (2012). No blood parasites were found in either of the two samples collected.

The clinical progression was noteworthy. Dehydration was reversed and force-feeding was initiated via oral administration of mashed fish, saline solution, and vitamin supplementation. The bird demonstrated progress and began to nibble on fish on the fourth day; diarrhea ceased on the fifth day. However, the bird's general condition then worsened: it became less active and its cloacal temperature dropped to that registered upon admission. A second blood collection was performed on the fifth day of care (Table 1). The bird died at the end of the fifth day.

Necropsy revealed congestion and caseous plaques distributed throughout the lungs. Parasites were found in the esophagus and stomach (*Contracaecum pelagicum* and *Seuratia shipleyi*), as well as in the small and large intestines (*Tetrabothrius* spp.). Tissue samples submitted for histological analysis revealed bacterial colonies immersed in cell debris and enveloped by multinucleated

giant cells in air sacs, revealing severe bacterial granulomatous air sacculitis. The cause of death appeared to be bacterial septic shock. The bird proved to be a juvenile female.

Only one report of veterinary care exists for albatrosses found along the coast of Brazil. Baldassin *et al.* (2007) reported biochemical blood findings of an Atlantic Yellow-nosed Albatross *Thalassarche chlororhynchos* found on the coast of São Paulo state, but no complete blood count was performed.

In the present study, we had the opportunity to observe a beached juvenile Black-browed Albatross under veterinary treatment for five days prior to dying. As there is no standard or even previous study reporting bloodwork for the species, we could only observe the differences between two samples taken during treatment. Between the first and second collections, the number of erythrocytes increased but they exhibited low hemoglobin, hematocrit, and mean corpuscular volume. Total leukocytes and the total number of lymphocytes and monocytes decreased, while heterophils and basophils increased. These data pointed to bacterial septic shock as a cause of death, as heterophils play an important role in combating systemic bacterial infection. Heterophils are generally the first defense cells released by the immune system and are the most abundant in this type of condition, accounting for approximately 80 % of inflammatory cells (Campbell 2015).

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