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Haematological and biochemical values for Procellariiformes found on the Brazilian coast

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SUMMARY

The Brazilian coast is a feeding area used by at least 37 species of Procellariiformes, two of them nest within oceanic islands in national waters. Nevertheless, these species lack of haematological and biochemical reference values, information necessary for bird health assessment and to support management decisions and reintroduction of rehabilitated birds to the wild. In this context, we worked on haematological values for some Procellariiformes species. Blood samples for the haematological tests were obtained from albatrosses and petrels suitable for release after rehabilitation. The hematocrit was determined by microhematocrit, by centrifugation at 12,000 rpm for 5 minutes. The total count of erythrocytes, leukocytes and thrombocytes was performed in Neubauer chamber. Differential relative counts of leukocytes was made on light microscopy with the blood smear stained with Instantprov (Newprov®). Biochemical tests were performed from serum samples submitted to different liquid reagents (Labtest®) and read by spectrophotometry. Statistical analyses were done with Reference Value Advisor V 2.1 and Microsoft Office Excel®. The values intervals (n = 26) obtained were: globular volume (34.2-63.7%), hemoglobin (8,49-50g / dL), leukocytes (1.244-22.340µL), thrombocytes (527-57.887µL), hematimetry (0.7-5.8 10⁶ / µL), heterophiles (45-96%), monocytes (1-28%), eosinophils (0-7 %), lymphocytes (5-54%), basophils (0-4%), total proteins (2,0-8,1g / dL), glucose (52.3-346.0mg / dL), (0.8-1.7g / dL), uric acid (0.7-18mg / dL), calcium (6.4-14.8mg / dL) , creatinine (118.6-1,905.5mg / dL), alkaline phosphatase (11.8-1,005.8U / L) and phosphorus (0.9-15.3mg / dL). Species analysed included *Macronectes giganteus* (n = 10), *Puffinus puffinus* (n = 8), *Thalassarche chlororhynchos* (n = 3), *Thalassarche melanophris* (n = 3), *Procellaria aequinoctialis* (n = 2). This study was limited by small sample sizes. Those reflect that we studied only live birds that stranded and were considered healthy after rehabilitation, sample size must be increased over time within a continuous monitoring program. This study is part of an undergraduate student project under ICMBio/CEMAVE supervision in order to initiate the long term work required to establish haematological reference values for Procellariiformes found in Brazil.