Quantitative and qualitative characteristics of the free surface respiratory macrophages (SM) of the domestic duck (*Anas platyrhynchos*) were compared with those of the domestic rabbit (*Oryctologus cuniculus*) under similar experimental conditions. The duck had significantly fewer SM compared to those of rabbit. In the duck, there was flux of SM as depicted by increase of SM during the first three progressive lavages before the number started to decline during the fourth and fifth lavages. In the rabbits, there was decline in number of the SM during the five progressive lavages. Morphologically, the cells were similar at light and electron microscopy levels. Ultra structurally, the SM had filopodial extensions and variable vesicular cytoplasmic bodies. The diameters were comparable with duck SM mean diameter measuring about 12 µm while that of the rabbit SM mean diameter being 13 µm. The mean volume density of polystyrene particles ingested by the SM, that is volume of particles per unit volume of SM, revealed that the duck SM had significantly higher mean phagocytic capacity at 20% than rabbit SM whose mean phahgocytic capacity was 9%. The assertion that domestic birds are prone to respiratory diseases due to dearth of SM alone may not be true. The higher phagocytic capacity observed in the duck SM probably compensates for the few resident SM. Vulnerability to respiratory diseases by the domestic birds may be due to other factors such as poor husbandry and management strategies and, severe genetic manipulations for fast growth and productivity that may have weakened cellular immunological defenses.