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Possible seal pox in the *Monachus monachus* Cyprus colony
Is stress and hunger a contributing factor?

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During a regular cave survey in 1998, a mass of dead fish was observed around an island on the west coast of Mersin, Turkey. Dynamite is a common tool to catch fish in this area. Such an accumulation of dead fish is a typical result of an explosion underwater. The fisherman usually harvests only those fish floating on the surface and the remainder is left for scavengers. This was an exceptional case because an adult male monk seal was present, feasting on dead fishes. The male was accordingly named as “Bombaci” (the bomber).

The same male posed for members of Gruppo Foca Monaca [Cilicia on my Mind, TMG 6 (1): 2003) in front of a cave which had previously been considered abandoned due to intense human disturbance. During the following years the same cave was regularly monitored by the METU-IMS team. In one of the visits in 2004, a shepherd living near to the cave spoke about a large black seal bearing a large wound. In December 2004, the METU-IMS team was able to identify this seal, which bore a large scar on his abdomen. The shape and position of the belly patch clearly indicated that he was none other than Bombaci. Thereafter he was repeatedly sighted in and around the cave. Once he accompanied the METU-IMS team during the visual fish census regularly carried out to monitor the state of the fish stocks in the protected area. In December 2005, he was sighted while mating in the same cave. Later, in January 2006, he was again sighted in the area, displaying another courtship play with a female. Almost every time he was sighted the scar was conspicuous, though no open lesion was recognized. However, since all

these observations were either made underwater in turbid conditions, or from a distance, it is not possible to be certain that the lesions were not present at that time, in what appeared to be the remnants of a healed wound.

In July 2006, he was spotted in front of a cave on the island of Cyprus, almost 45 miles south of the cave where he was previously sighted. The large and inimitable posterior-ventral scar and identical white belly patch left no doubt as to the identity of the individual [see Seals of Northern Cyprus , TMG 9(2): 2006]. The cave was monitored with infrared monitors and more than 50 photos of Bombaci were taken automatically during the period between July 2006 and January 2007 (Fig. 1). These photographs enabled closer inspection of the scar on his body (Figs. 2 & 3).

Fig. 1. Bombaci, recorded by automatic camera in a cave in Northern Cyprus.

Since the bleeding lesions were considered a cause for concern, Uludag University, Faculty of Veterinary Medicine, Department of Internal Medicine, was contacted for advice and input. As the skin lesions were possibly a symptom of infection by phocine distemper virus, photos were also sent to the faculty for closer examination. Cutaneous nodular lesions on the cranial region of the rear flipper however (Fig 3) seem more like pox virus lesions, which has been identified morphologically in skin lesions of both captive and free-ranging pinnipeds and cetaceans (The Merck Veterinary Manual 2006). Seal pox is a proliferative lesion characterized by the formation of numerous 0,5 to 3 cm cutaneous nodules on the head, neck, and flippers of affected pinnipeds (Becher 2002). These nodules eventually ulcerate and are slow to heal. Cutaneous spread of this disease is mostly by head and neck rubbing, a common social behaviour of sea lions and other pinnipeds. A break in the epithelial surface is required to start an infection. Lesions can recur (Hicks 1987). The large scars around the nodules on Bombaci's rear flipper and abdomen that developed over the healed areas may indicate that the lesions are recurring. Numerous small nodules on the head and neck are appropriate to the classical appearance of cutaneous poxvirus lesions although electron microscopy and/or PCR testing on tissue samples from lesion areas are needed to diagnose the possible agent (Tryland et al. 2005).

Fig. 2. Photographs recorded by automatic camera allowed closer inspection of the scar and lesions on his body. [enlarged image]

Fig. 3. Close up image showing cutaneous nodular lesions on the cranial region of the rear flipper.
[enlarged image]

Poxvirus is rarely fatal; however, it is regarded as having an opportunistic nature, causing outbreaks with high morbidity when the immune status of the animals are low, when food availability is scarce or when the animals are stressed (Tryland et al. 2005), as recently seen among reindeer in Finland and Norway (Büttner et al. 1995, Tryland et al. 2001).

Poxviruses from seals are zoonotic, giving cutaneous infections on fingers and hands of people handling diseased animals (Hicks & Worthy 1987, Tryland 2000), which should be noticed by persons involved in handling and care of seals.

References

Becher, P. 2002. Characterization of seal pox virus, a suspected member of the parapoxviruses. Arch Virol 147:1133-1140.

Büttner, M., C. Von Einem, C. McInnes and A. Oksanen. 1995. Klinik und Diagnostik einer schweren Parapocken-Epidemie beim Rentier in Finnland, Tierärztl. Prax. 23, 614–618.

Hicks, B. D. and G. A. Worthy. 1987. Sealpox in captive grey seals (Halichoerus grypus) and their handlers, J. Wildl. Dis. 23, 1–6.

Hicks, S. D. 1987. Seal pox in captive grey seals and their handlers, J. Wild. Dis., 23: 1.

Merck Veterinary Manual, The. 2006. Merck & Co., Inc, Whitehouse Station, NJ, USA.

Tryland, M. 2000. Zoonoses of arctic marine mammals, Infect. Dis. Rev. 2, 55–64.

Tryland, M., T. D. Josefsen, A. Oksanenand and A. Aschfalk. 2001. Contagious ecthyma in Norwegian semidomesticated reindeer (*Rangifer tarandus tarandus*), Vet. Rec. 149, 394–395.

Tryland, M., J. Klein, E.S. Nordøy and A.S. Blix. 2005. Isolation and partial characterization of a parapoxvirus isolated from a skin lesion of a Weddell seal. Virus Res. 108(1-2):83-7.