***Luckenbach* Restoration: Shearwater Colony - Taiaroa Head Project, NZ**

Update 11-07-12 H.M. Nevins

The Taiaroa Head project benefits nesting Sooty Shearwaters by reducing human and grazing disturbance and minimizing rabbits at one of the largest remaining mainland colonies in NZ. A fence to exclude rabbits, grazers and human intrusion was partially erected in 2012 (see photos below). A gate, cliff edges and rabbit wire are to be completed by December 2012. Biologist Lyndon Perriman reports counts of occupied burrows this season (2012/13) was 1200 compared to 900 last year (2011/12). In June 2012, landowner Reid initiated control of rabbits and brush-tailed possums throughout his fenced property including the fenced shearwater colony area. As a result, Perriman did not see any rabbits while surveying the burrows this season compared with past years when he estimated over 200 rabbits within the main count sites. Perriman notes the increase in shearwater burrows could be due to ease of identification of bird activity without rabbits this year. Rabbits apparently compete for burrows with shearwaters and can displace them. We are happy to report that shearwaters have also increased in areas at the extremities of the main colony concentration, suggesting colony expansion.

Financial Report: To date, Oikonos Ecosystem Knowledge has spent the total $50,084 of the $55,649 allocation received on: planning and coordination ($7,125), fencing supplies and materials ($15,300), permitting, excavation, posting and fence construction ($20,400), and administrative overhead ($7,259). The remaining balance for reporting ($5,565) will be requested at the time of the submission of the final report. Significant cost sharing from in kind donation of labor and equipment were made by landowners Perry Reid & Family, Nature's Wonders, Dunedin, NZ for pest control, and NZ Department of Conservation for shearwater monitoring.

Photo 1. Martin Reid (landowner's son) looking along the new fence at a completed section. Note the rabbit digging at the edge of the mesh. The landowners patrol the fence line often checking for signs of entry and collapse any rabbit holes. The mesh 'footing' at the bottom seems

to be deterring most rabbits from getting through before they get detected. (Photo: Jaime Newman)

Photo 2. Martin showing me the fine mesh base complete with 'footing'. Note how the plants are binding into this and apparently helping to keep it pegged down and deter rabbits digging through. The height of the fine mesh is about 500mm - high enough to stop bunnies jumping through. (photo: Jaime Newman)

Photo 3. Temporary fencing at site of the planned gate for entrance to the titi colony. (photo: Jaime Newman)

Photo 4. Current end of the fence at the cliff side. They plan to build a spiral fence system here to deter and confuse rabbits and possibly even other species such as hedgehogs getting through. (photo: Jaime Newman)

Photo 5. Looking up the completed section past Perry's entrance gate - note the start of his rabbit-proof fence in front of his sign - heading off to the right. Within Perry’s eco-farm, they continue to control introduced mammals including possums, rabbits and hedgehogs. (photo: Jaime Newman)

Photo 6. Partially completed section - note there is no fine mesh at the base until some way along. (photo: Jaime Newman)

Photo 7. Posts only along secondary fencing wall within the Reid's fenced and predator-controlled area. (photo: Jaime Newman)

Photo 8. Looking down the section of fence that divides the block Perry owns and the "Maori" Block (to the right). This section still requires fine mesh to be added to the base. (photo: Jaime Newman)