

Project Update: May 2010

1. Promote use of indigenous plants for restoration and landscaping by increasing the diversity and quantity of seeds and plants that Renu-Karoo can supply, by researching restoration techniques, requesting and documenting feedback from clients to understand causes of restoration success and failure, by making information available, and by investment in marketing.

We have increased the diversity of seeds and plants that we supply. Our expanded stock includes a number of indigenous plants seldom if ever propagated commercially. We were proud to add *Hermannia grandiflora* to the list of plants that we can offer our clients, and this and other poorly-known species attracted the attention of two other indigenous plant nurseries (Kirstenbosch Garden Centre and New Plant Nursery). Visitors to the Renu-Karoo indigenous nursery increased and we were pleased to have orders and visits from indigenous nurseries in other parts of the province as well as from farmers, local gardeners and landscapers.

Renu-Karoo continues to improve its knowledge base through research. We distributed 25 questionnaires have received five replies from clients that purchased seed for restoration in 2009. A mining company reported excellent grass establishment and sent photos to prove it. One farmer reported excellent germination but establishment failure as a result of wild herbivores browsing seedlings. The remaining three clients reported poor establishment due to lack of follow-up rain or harsh conditions following seeding. Field visits to problems sites revealed patchy establishment due to uneven distribution of water in the landscape. We need to improve our information base to better advise clients how to prepare the land for seeding and how and when to sow.

Monitoring of rehabilitation demonstration trials, established 12 months for the Ostrich Business Chamber ago by Conservation Management Services and Renu-Karoo Veld Restoration, continued in January 2010. Monitoring was carried out by MSc student Petra de Abreu assisted by Sue Milton and Nature Conservation students Sadé Cowley and Willem Mathee. Petra's research is sponsored by Asset Research (see www.rncalliance.org) and supervised by Prof. Sue Milton and Prof. Timm Hoffman at University of Cape Town. Additional monitoring was carried out by 12 University of Cape Town Conservation Biology masters students during a field trip led by Prof. Sue Milton in April 2010. This field trip served to introduce this international group (comprising students from Canada, Costa Rica, Germany, Kenya, Scotland, South Africa, UK and USA) to methods, challenges and rationale for ecological restoration in arid environments. Their preliminary results indicate that many of the palatable plants that established from sown seed a year ago survived the hot dry summer. However survival was better in hand dug pits that trapped water and poorer where wild herbivores browsed the new seedlings. On the basis of findings from this pilot study we will advise our clients that sowing in water traps and excluding herbivores will make reseeding of damaged rangelands more cost-effective.

Our participation in the ASSET Research project, involving seven academics and 16 students conducting economic, hydrological and ecological research at eight sites in South Africa, has enabled us to extend our research capacity and to participate in multidisciplinary

discussions, involving government representatives, academics and practitioners, on restoration costs and benefits.

Experiential trainees Sadé Cowley and Willem Matthee established an additional restoration trial was established adjacent to a public road near Prince Albert in January 2010 to compare seed establishment on bare ground with establishment in hand-dug water harvesting pits with and without brush-packing.

To improve our business skills and marketing, we invited the SEDA (Small Business Enterprise Development Agency) to assess our business and advise Renu-Karoo how best to work towards economic viability. A SEDA agent visited Renu-Karoo on 3 February 2010 and advised that the major weakness in the business was marketing and turnover. Our marketing plan for 2010 therefore includes: (1) more prominent sales outlet; (2) increased visibility through publicity and advertorials in magazines and for or a relevance to potential clients (agriculture, engineering and landscaping sectors); and (3) proactive person-to-person marketing to the engineering sector.

In March 2010, we addressed the first part of the marketing plan by arranging to rent a property in the main road of Prince Albert. The main road “shop” will become available for use by Renu-Karoo in July 2010. Increased visibility is expected to lead to the increased turnover required to make the business financially viable. We also joined the local Chamber of Commerce.

Our website <http://www.Renu-karoo.co.za> remains our best marketing tool. For this reason we have continued to update the website and to add downloadable documents (in two languages) with information on the plants that we supply.

2. Support two experiential training students

In January 2010, two new experiential training students, Sadé Cowley and Willem Matthee, both third year Nature Conservation students registered with Nelson Mandela Metropol University, joined our team for the year. They are working for Renu-Karoo to obtain experience and skills applicable to conservation management.

3. Assist the local municipality with aspects of environmental management such as environmentally acceptable waste disposal options (composting, beneficiation of sewage effluent), invasive plant control, water-wise landscaping and development of indigenous woodlots.

Our attempts to work directly with the municipality have been unsuccessful. We are therefore trying to reach decision makers by informing ratepayers who will lobby for environmental causes in the village. In April 2010, we led an outing of the cultural foundation entitled “Water, energy and waste management will shape future culture” that followed the course of the river that feeds this desert village from the mountain to the sewage works, and discussed the lack of planning for maintaining riparian habitats or for supporting the growing population. In May 2010, we led an outing of the Garden Club that focussed on alien invasive plants, particularly those often planted in desert gardens. Our talk and demonstration dealt with reasons for importing alien species, where they are spreading, what problems they cause and how they can be controlled. We have also written

articles for the local newspaper – one dealing with food gardens and the other with provision of drinking water for wildlife along a canalised river.

4. Apply to Cape Nature for formal conservation status for the small-holding. Clear alien plants and develop activities to subsidise conservation management.

Renu-Karoo applied to the Department of Water Affairs for a herbicide subsidy in January 2010 in order to remove alien invasive riparian shrub *Tamarix ramosissima* from the stretch of the river that runs through the farm managed as a private nature reserve. Weekly fence patrols continued to discourage informal hunting of birds, reptiles and mammals on the land.

The students are progressing with mapping habitats and adding to plants and animal checklists. These data will be used in the application for conservation status. Nature walks are increasing in popularity and so far this year we have taken eight groups (41 people) for 2-3 hour walks and received very positive feedback from all participants. The most frequent comments are that they “see the drab Karoo with new eyes” and are fascinated by the strange plants, ants and tortoises.

The small holding is a release site for snakes and other reptiles removed from houses and gardens in the village. During 2009, the local snake catcher released 42 reptiles, mostly Cape cobras, puff adders and monitor lizards onto the small-holding

5. Expand socio-economic impact by involving pickers in outlying villages, and improving our business skills

Since January 2010, Renu Karoo has supported six local people and two students. There are three full-time employees (Wilfred Luttig, Meraai Isaacs, Caroline van de Ross, and three part-time staff (Maxelene Jaftha, Jasmien Pienaar and Ernest Murphy), in addition to the two experiential trainee students (Sadé Cowley and Willem Matthee). The whole team assists in environmental education and research activities to improve vegetation rehabilitation, as well as in the production and sale of compost, plants and seeds.

Plant propagation facilities have been expanded and now include a mist bed for rooting of hardwood cuttings and well as larger display and hardening-off areas for indigenous trees and shrubs.

The hot, dry summer of 2009-2010 reduced seed production and may have been responsible, together with the economic downturn, for a reduction in seed sales during the period September 2009 to March 2010. During this period, Renu-Karoo sold only 128 kg of seed. Although this was disappointing, a positive indicator for the future viability of the ecological restoration business was an increase in the proportion of engineering companies among our clients. These included Viscas Corporation, Asla Construction, Aurecon Construction, RoadMac Surfacing. Renu-Karoo contracted one team in another village 80 km to the north to collect 40 kg of grass seed for one these clients in November 2009.

Compost demand continued throughout summer as water restrictions made the benefits of mulch evident. Over the past 6 months, Renu-Karoo sold 15 m³ of compost to gardeners and the local municipality. An increasing number of householders and farmers bring garden and agricultural waste to Renu-Karoo for recycling. Renu-Karoo has reduced its use of municipal water by pumping recycled water for use in compost making.

6. Other conservation, environmental and educational activities

Knowledge-based services

Renu-Karoo was invited to set up a diorama at the Fransie Pienaar Museum in Prince Albert to draw attention to the high diversity of tortoises in the Nama Karoo and to inform the public of the ecological role of tortoises. The diorama was constructed by experiential trainees Sadé Cowley and Willem Matthee under the guidance of Sue Milton-Dean.

Sue Milton-Dean, Richard Dean and students carried out a specialist faunal and flora assessment for a prospecting company and a road building company, as well as visiting two farms to advise on approaches veld restoration.

Environmental education and outreach

24 March 2010: 20 botany honours students from University of Cape Town visited Renu-Karoo Veld Restoration to learn about Karoo vegetation and discuss approaches to ecological restoration in arid ecosystems.

24 April 2010: the Garden Club joined the Prince Albert Cultural Foundation's outing to investigate the source, use and fate of water in a desert village. The morning excursion entitled "Water, Energy, Waste will shape your future", was led by Sue and Richard Dean of Renu-Karoo. Starting at the weir that diverts water from a mountain stream to the village, the group visited groundwater pump stations, drinking holes for wildlife, the water purification plant, woodlot and food garden allotments, the sewage works, and Renu-Karoo nursery.

5 May 2010 Sue and Richard Dean of Renu-Karoo took the garden club on a walk around the town to learn about invasive alien plants and their control.

18-21 May 2010 Renu-Karoo students and staff ran three natural history workshops for the Grade 7 learners from the Prince Albert Primary school. A total of 90 young people participated in the 2-hour workshops (30 per workshop). Using local plants and animals as models, they learned about plant and animal classification, amphibian conservation issues, and plant-animal interactions including pollination and dispersal.



Renu-Karoo team April 2010. The Renu-Karoo team photographed at the nursery.



3

Establishing & monitoring rehabilitation trials



2

Monitoring ostrich camp rehabilitation



Hermannia grandiflora

1 New Karoo plants in cultivation



Sutherlandia fruticosa



5 Sewage grey-water in compost-making

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6 Tortoise display in museum



Newspaper articles



7 Water issues in a desert village: mountain stream to sewage works