

TEMPERATE INDIGENOUS GRASSLAND GAINS IN SOUTH AFRICA: LESSONS BEING LEARNED IN A DEVELOPING COUNTRY

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ABSTRACT

The fragile indigenous grassland conservation in South Africa since 2006, a landmark heralding the birth of

biodiversity stewardship in our temperate grassland biome. Since then an additional 124,983 ha of

the years languished behind conservation efforts directed towards the more charismatic tropical grasslands and tree-dominated biomes. For example, Henwood (1998a) and Bertzky et al. (2012) reported that biomes such as savannas, subtropical and tropical forests, and mangroves have all been afforded far higher levels of protection than temperate indigenous grasslands. The UH D V R Q L V S D U W O \ D F F R X Q W H G I R e m p e r a t e V e g e t a t i o n W a r d a n t i c a y B i o d i v e r s i t y F R P P R Q V \ H [D P S O H W K H R Q F H Z L f o r M a i n t e n a n c e \ H W K L J K O \ a m e n a b l e i n d i g e n o u s g r a s s l a n d s h a v e b e e n l a r g e l y t r a n s f o r m e d i n t o p r o d u c t i o n l a n d s c a p e s (H e n w o o d , 1 9 9 8 b ; H e n w o o d , 2 0 1 0) . S a d l y , c o n g r u e n c e w i t h a r e a s o f r i c h m i n e r a l a n d a g r i c u l t u r a l r e s o u r c e s h a s l e d t o i r r e v e r s i b l e l a n d - u s e c h a n g e a t t h e h a n d s o f d e v e l o p m e n t a n d i n t e n s i v e r e s o u r c e u s e , w i t h f a r l e s s s e c u r e d t h r o u g h t h e m o r e m e a s u r e d a n d c o m p a t i b l e f o r m s o f l a n d - u s e m a n a g e m e n t s u c h a s c o n s e r v a t i o n a n d s u s t a i n a b l e

resource use. It appears that a tipping point has now been reached whereby temperate grasslands in many parts of the world have been reduced to vestiges of their former ecological state (Henwood, 1998b; Henwood, 2006; Peart, 2008a). The most imperilled and least protected terrestrial biome on the planet (Henwood, 1998b; Mark & McLennan, 2005; Henwood, 2009; Henwood, 2010) requires a Herculean effort to stem further habitat loss and bring representative samples of

Temperate Vegetation Ward and City Biodiversity
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Parties to the Convention on Biological Diversity in Nagoya, Japan (CBD, 2012). Temperate indigenous grassland conservation is slowly gaining momentum thanks largely to the Temperate Grasslands Conservation Initiative (TGCi), launched officially in 2008 at the Joint International Grasslands-Rangelands Congress hosted in Hohhot, China (Peart, 2008b; Henwood, 2009; Henwood, 2010; Mark, 2012). The primary target or focal areas for temperate indigenous grassland

2006). In South Africa, six provinces, namely Free State, Eastern Cape, Mpumalanga, KwaZulu-Natal, North -West

representing the overall gain); and (2) pending gains

purchased in 2010 for ZAR 3.2 million (ZAR is currently trading at 11.00 to the US\$ although was firmer against the US\$ at the time). Both properties adjoin, and have thus been incorporated into, the Karkloof Nature Reserve through declaration in 2012. These properties were purchased by Wildlands Conservation Trust and donated to the Board of the local provincial conservation authority, Ezemvelo KwaZulu-Natal Wildlife. Although not a recent acquisition, Matatiele Nature Reserve (4800 ha), located in the north-eastern corner of Eastern Cape, was established as the Matatiele Commonage when the town became a municipality by declaration in 1904

1. National Protected Area Expansion Strategy:

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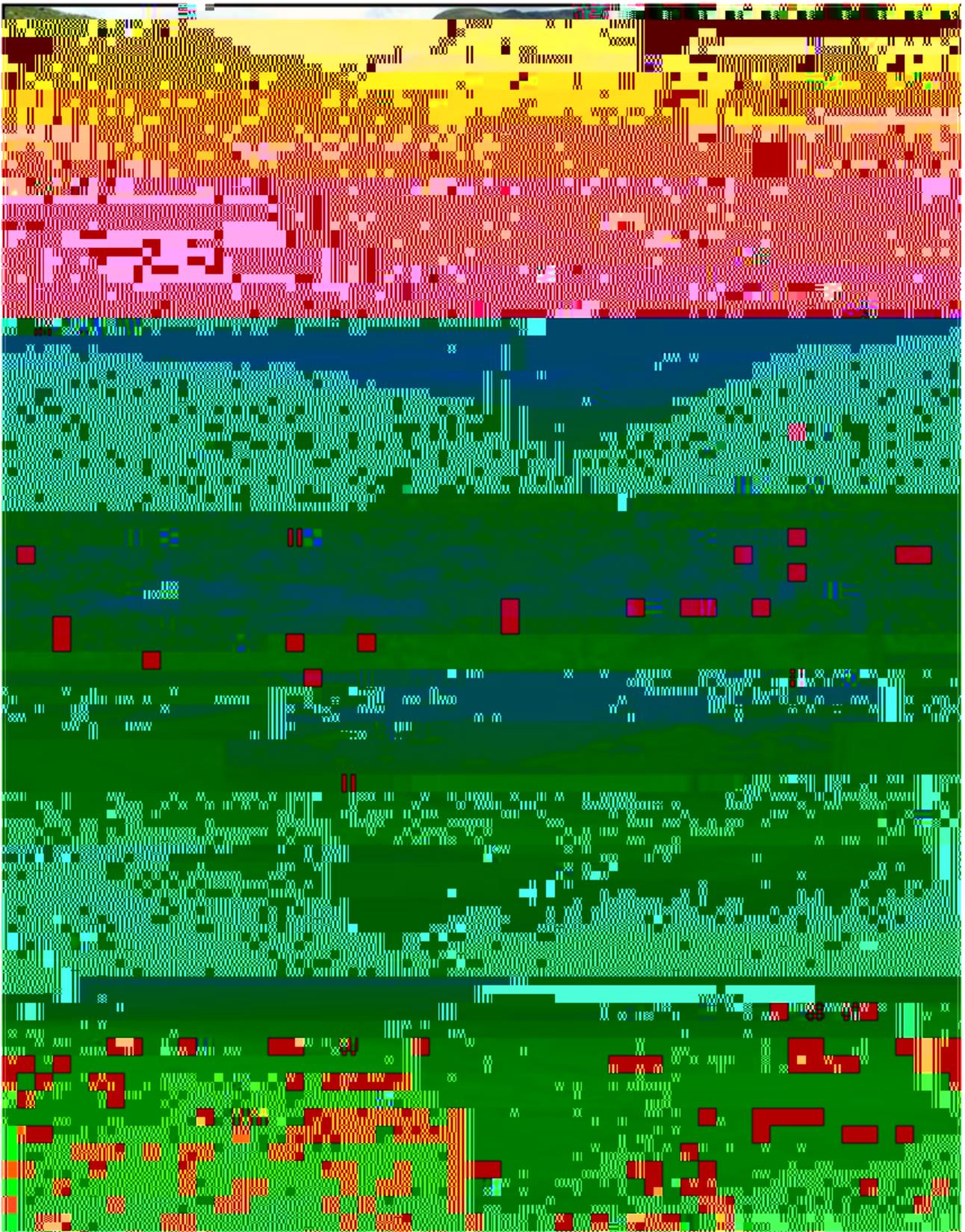
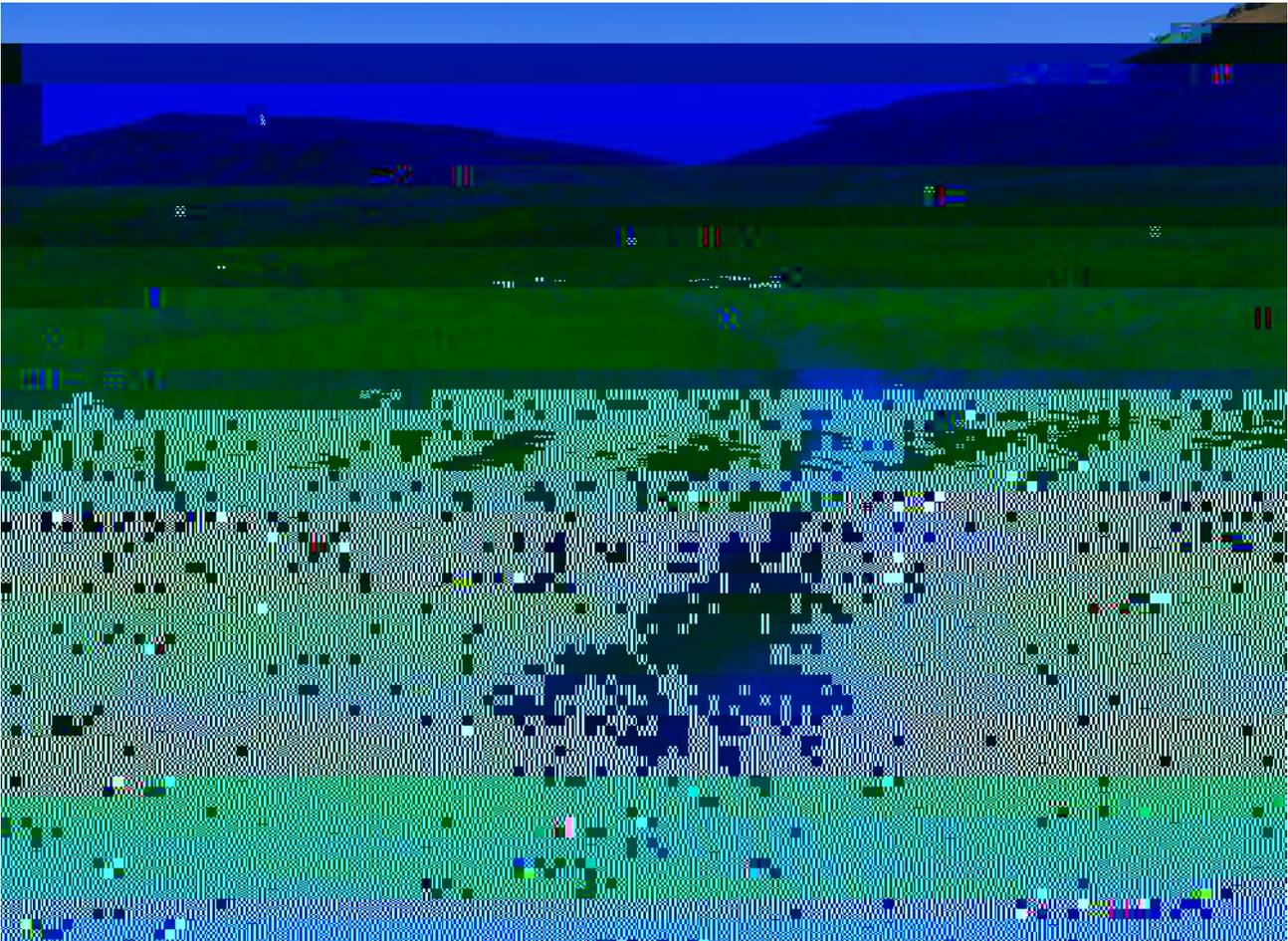


Plate 1: Examples of newly declared, or soon to be declared, temperate indigenous grassland protected areas in South Africa. A, the proposed Umgano Nature Reserve, initiated by the Mabandla Community in the remote Ntsikeni region © Clinton Carbutt. This area supports a temperate grassland vegetation type known as Drakensberg Foothill Moist Grassland, on relatively steep and rocky slopes; B. & C. Mt Gilboa Nature Reserve, the first private nature reserve declared within an agroforestry estate © Clinton Carbutt; D. the greater Ncandu expansion area © Clinton Carbutt; E. Pongola Bush Protected Environment, securing the important headwaters of the Pongola River © Greg Martindale; F. a proposed biodiversity stewardship site in the Underberg region, dominated by a large wetland system supporting the critically endangered wattled

mechanism for protected area expansion and rural development (Stephens, 2009), and the piloting of



authorities have to employ district staff, facilitators and ecologists who all engage with the landowner in the establishment *and* maintenance phases. It is estimated that a single facilitator should be responsible for no more than one landowner. This is unfortunately a misconception. Furthermore, for the BSP between state and landowner has to be in place in perpetuity.

Evident from the results is that 95 per cent of the gains achieved for temperate indigenous grassland conservation are the direct result of the BSP (Figure 3). A significant contribution of the BSP is its role in helping to achieve protected area expansion and biodiversity targets. By securing further habitat such as the endangered Midlands Mistbelt Grassland vegetation type, the BSP has contributed to the protection of the endangered Oribi Antelope (*Ourebia ourebi*), the critically endangered Wattled Crane (*Bugeranus carunculatus*), and the critically endangered Blue Swallow (*Hirundo atrocaerulea*). The gains achieved through the BSP also resonate in terms of formally securing high water yield areas.

Informal contributions through Conservancies, Sites of Conservation Significance and Natural Heritage Sites, none of which are declared formal nature reserves, can now be superseded by a reputable programme that gives private landholders an opportunity to own and manage formal conservation areas on equal standing with state-managed protected areas and thereby contribute to the formal conservation estate. The BSP in terms of area under protection and biodiversity target achievement. The BSP also allows better scrutiny of the private offering and imposes a uniformly high standard of protected area management with title deed endorsement. The BSP model also offers a wide range of landowner extension support, including assistance with burning programmes (e.g. pre-burn inspections and advice on burning regimes), invasive alien plant control (including the supply of herbicides) and wetland rehabilitation (Dugmore, 2010). The BSP is well aligned with Natural Resource Management Programmes to harness funding made available in such landcare-orientated initiatives. The BSP is also well favoured because landowners benefit from incentives including tax rebates and rates exemptions. Furthermore, in pursuing the BSP in South Africa, two key serendipitous spin-offs have also been generated:

i. A dynamic and flexible framework to explore new models of protected area expansion and co-management: where possible, BSP sites are often protected areas to improve connectivity through the creation of biologically meaningful corridors and contiguous linkages, especially important in climate change mitigation and adaptation, enhanced delivery of ecosystem goods and services, and maximization of water yield areas. However, the BSP model allows even further flexibility and innovation in the design and management of the protected area estate, for example the practice of joint declarations between state-managed and private neighbouring protected areas, culminating in co-management agreements. A good example is Fort Nottingham Nature Reserve, a small temperate indigenous grassland reserve in the KwaZulu-Natal Midlands. A process has been initiated whereby this state-managed protected area (130 ha), and the neighbouring private property (1096 ha) earmarked for declaration through the BSP, will be gazetted as a single protected area (1226 ha) represented by a dual management authority (established through a Land Management Association represented by either state-municipal or state-private partners) and managed from a single management plan. Further benefits include simplified management boundaries, enhanced ecological processes, synergistic law enforcement efforts and the production of management plans for state-managed reserves that previously were not in place.

ii. Botanical exploration of previously unexplored or under-explored areas: another dynamic spin-off from the BSP is the new territories that have opened up to botanical exploration by both professionals and amateurs. A number of properties in outside world, either because these properties were unknown or because it was not possible to obtain landowner consent, especially in communal areas, where determining land ownership is often a challenge. With the owners of such properties now volunteering for the BSP, renewed collecting efforts to document a baseline flora as part of the site review and management plan process has resulted in the discovery of new (and presumably rare) plant species such as the milkweed, *Stenostelma* sp. (Apocynaceae), from the proposed Arrarat Nature Reserve (*Isabel Johnson, proposition of prop7(such)38m0u3(so)-4t8152 13152 I7S8(7such)3so-*

(Grasslands Programme); BirdLife South Africa;

Appendix 1: Continued...

Protected Area (as per gazette notice)	Province	Declaration Level	Month & Year Declared	Gazetted Area (ha)			
Chrissiesmeer Protected Environment	Mpumalanga	Protected Environment	January 2014	59,432	Chrissiesmeer Protected Environment Landowners Association	BSP	4
KwaMandlangampisi Protected Environment (expansion)	Mpumalanga	Protected Environment	January 2014	3094	KwaMandlangampisi Protected Environment Landowners Association	BSP	6
Mabola Protected Environment	Mpumalanga	Protected Environment	January 2014	8772	Mabola Protected Environment Landowners Association	BSP	8
Mndawe Trust Protected Environment	Mpumalanga	Protected Environment	January 2014	826	Mndawe Trust	BSP	2
Tafelkop Nature Reserve	Mpumalanga	Nature Reserve	January 2014	1208	Landowner	BSP	7

Appendix 2: Proposed protected areas to be declared as either nature reserves or protected environments in the temperate

Appendix 2: Continued....

Protected Area	Province	Declaration Level	Declaration (expected)	Area (ha)	Management Authority	Mechanism	
Mt Currie Nature Reserve (expansion)	KwaZulu Natal	Nature Reserve	Late2014	± 600	Ezemvelo KwaZuluNatal Wildlife	Acquisition (donation by Local Municipality)	22
Pongola Bsh Protected Environment (expansion)	KwaZulu Natal	Protected Environment	Late 2014	1922	Pongola Bush Protected Environment Landowners Association	BSP	8
Saddle Tree Protected Environment	KwaZulu Natal	Protected Environment	Late 2014	615	Landowner	BSP	19
Umgeni Vlei Plateau Nature Reserve	KwaZulu Natal	Nature Reserve	Late 2014	824	Ivanhoe Farming Company (Pty) Ltd	BSP	18
UpperuThukela Nature Reserve	KwaZulu Natal	Nature Reserve	Late 2014	44,525	Amazizi and Amangwane Communities	BSP	12
Arrarat Nature Reserve	KwaZulu Natal	Nature Reserve	2015	6500	Landowner	BSP	7
Total (ha)	96,641						

ABOUT THE AUTHORS

Clinton Carbutt is a plant and conservation scientist in the employ of Ezemvelo KwaZulu-Natal Scientific Services with particular interests in the biogeochemical aspects of alpine grasslands, as well as the high elevation floristics, biogeography and ecology of the alpine region). He is also interested in temperate

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RÉSUMÉ

Afin de protéger la nature fragile des prairies tempérées indigènes à l'échelle mondiale, la Commission Mondiale des Aires Protégées de l'UICN a lancé l'Initiative de Conservation des Prairies Tempérées. Cette LQLWLDWLYH D PLV HQ H[HUJXH O¶XUJHQFH GH OD SURWHFWLRQ GH F toutefois des interventions de la part des autorités locales de conservation, en collaboration avec les organisations non-gouvernementales (ONG), doivent encore être exigées afin d'améliorer le niveau de protection sur le terrain. A cet égard, nous citons les progrès réalisés depuis 2006 pour la conservation des prairies indigènes tempérées en Afrique du Sud, qui ont ouvert la voie à une réelle gestion de la biodiversité dans le biome des prairies tempérées. En effet depuis lors, 124 983 ha supplémentaires de prairies WHPSpUpHV RQW pWp PLV VRXV SURWHFWLRQ RIILFLHOH HW K être accrédités d'ici la fin 2014. Nous discutons aussi des forces motrices qui soutendent ces acquis- à savoir le programme en faveur des prairies de l'Institut National de la Biodiversité en Afrique du Sud, la Stratégie Nationale d'Expansion des Aires Protégées, les associations locales de gestion de la biodiversité, et OHV IRQGV TXL WUDQVLWHQW SDU OH &ULWLFDO (FRV\WHPV 3DUWQH FRQWULEXWLRQ GH O¶(WDW &RPSWH WHQX GHV DYDQWDJHV WDWQ encourageons les autres pays qui possèdent des prairies tempérées indigènes à développer des structures similaires afin de préserver ces parcelles représentatives et viables de l'un des plus impressionnants biomes terrestres.