Gazania – what are we doing to our beaches?



Fig. 1. Gazania, south Piha Beach. Photo: 4 Dec 2015. All photos taken by the author.



Fig. 2. Gazania-infested dunes at south Piha Beach. Photo: 4 Dec 2015.



Fig. 3. Fluffy seeding heads of gazania high up on the cliffs at south Piha, below Tasman Lookout. Photo: 4 Dec 2015.

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The southern African daisy genus, Gazania, has 16 species. They are perennial herbs with large and colourful flowerheads of yellow (bright or pale) or orange ray-florets, frequently with a black eye-spot near their base (Fig. 1). There are two common cultivated species recognised in New Zealand, both of which have become widely naturalised: Gazania linearis and G. rigens - the earliest record was in 1940 (Webb et al. 1988). The former has short stems and persistent dead leaves, whereas G. rigens has long stems and deciduous dead leaves. The leaves are green above and white-hairy below, petiolate, and margins entire to divided. However, the genus has been subject to a lot of hybridisation and cultivar selection and possibly most material in New Zealand is not a pure species (Webb et al. 1988).

Their showy flowerheads, long-flowering period, tolerance to salt-laden winds and droughts has resulted in gazania being popular for coastal plantings on private and, illegally, on public land throughout much of New Zealand. They do particularly well in sand dunes where they mainly spread vegetatively (Fig. 2). They also do well in roadside gravel, and pebble beaches. However, in recent years I have noticed new populations establishing high on the rocky, volcanic coastal cliffs at south Piha (Fig. 3) in west Auckland. These populations can only be establishing by wind-blown seed (Fig. 4) and the populations are increasing. Interestingly Webb et al. (1988) reported that mature achenes had not been seen in New Zealand. Perhaps setting viable seed in New Zealand is a recent phenomenon?



Fig. 4. Dry gazania seeds (achenes) are 5–6 mm long and covered in silky hairs up to 5 mm long. Seed from AK 359769, Piha, 4 Dec 2015. Scale = 1mm.

In many popular coastal places the local beach care groups and councils are doing a wonderful job controlling where the public walk across sand dunes, re-establishing pingao (Ficinia spiralis), spinifex (Spinifex sericea) and other native sand binders (Fig. 5)., but they seem blind to the 'pretty' daisies. Most coastal aazania gazania were probably originally planted but they continue to spread. This is true not only at Piha, in west Auckland, but also at many other sandy beaches throughout New Zealand, where they are competing with the native sand-dune species, e.g. Onetangi (Waiheke Island), Kaitoke (Great Barrier Island), Whangamata and Papamoa Beaches (both in the Bay of Plenty). They can also be found spreading in roadside gravel by Ngawai near the Cape Palliser, and even the pebble beaches are not immune to gazania invasion, as can be seen at Birdling's Flat (Fig. 6) south of Christchurch.



Fig. 5. An Auckland Council sign encouraging people not to walk on the dune plants, while gazania flourishes in the adjacent dunes. Photo: south Piha, 4 Dec 2015.

Do we want our beaches and coastal cliffs dominated by gazania? Come on, it's time to stop ignoring this pretty invader and rip it out! Congratulations to Auckland Council for putting gazanias in their Proposed Regional Pest Management Plan (Anon. 2017) as a research priority because they may pose risks to coastal ecosystems or other disturbance-prone native ecosystems in Auckland.

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I thank Peter Bellingham for alerting me to the extensive Birdling's Flat gazania population.



Fig. 6. Gazania is locally abundant and the main wild plant on the extensive pebble beach at Birdling's Flat, Canterbury. Photo: 12 Jan 2016.

References

Anon. 2017: Proposed Regional Pest Management Plan, Auckland Council, Nov 2017 (https://www.aucklandcouncil.govt.nz/have-your-say/topics-you-can-have-your-say-on/regional-pest-management-plan/Documents/proposed-regional-pest-management-plan.pdf)
Webb, C.J.; Sykes, W.R.; Garnock-Jones, P.J. 1988: *Flora of New Zealand, vol. IV.* Botany Division, D.S.I.R., Christchurch. 1365p.