TheTreeApp making strides in SA tree identification

By Cari Coetzee   18 Sep 2017

TheTreeApp, which functions much like Google but for trees, was launched recently. The app, with extensive tree information, beautiful illustrations and GPS location and search capabilities, allows South Africans - whether they are students, conservationists, botanists or avid nature lovers - to investigate, search and identify and learn about trees. We chat to the founder and co-creator of one of the most powerful tree identification apps on the market, Val Thomas, to find out more.

Val Thomas, founder and co-creator of TheTreeApp

▦ *What is TheTreeApp and why did you create it?*

TheTreeApp is a highly intelligent, interactive resource, in the form of a sophisticated app that helps/enables users to discover more about trees in South Africa than they could ever have known before. It is much more than simply a process of identifying trees through a unique smart search - there is so much material that it is has been cited as an encyclopaedia of trees, on one device. We built it over six long expensive years because we believe that trees are a central component of virtually every ecological zone in our country as well as being a life force in our cities and in our own gardens. But sadly trees are not as easy to get to know as other natural species like birds and mammals because they differ from region to region as a result of climate, soil, etc. Botany is essentially complicated and we have spent an incredible amount of time finding ways of utilising simple English and straight-forward visual attributes that anyone can use as identification criteria.

▦ *Tell us about the development of the app*

Six years is a long journey, but we aimed for TheTreeApp to be as good as we could possibly make it – which we believe we achieved. The data collection was the first step being initiated as a computer programme close to seven years ago before apps were really the 'in thing'. The data in the app, for the search, is not the run-of-the-mill material that can be found in the average tree book and it has tested the resilience and good humour of the qualified botanists and the plain-English-plant-speak brigade to find the common ground that met both botanical accuracy and easy-accessibility.

Dr Robbie Robinson's experience and skill have guided this ship through treacherous storms of passion and problems, and we are well satisfied with the results. The extensive information contained in the texts associated with each species is a mixture of the comprehensively published facts about the species (leaf type, flower colour, etc.) and the specifically developed TheTreeApp speak used in the search.

Our art-work literally started five years ago and Joan van Gogh has steadily produced five full-colour paintings of leaf, flower and fruit, a week to reach the mammoth total of one piece for each tree in the app – 1,114 in all. This is 979 indigenous and 136 aliens most of which are invasive. Penny Moraites has achieved the same extraordinary feat in less time; doing black and white twig sketches that offer a range of leaf thumbnails, wherever variation required it. This is a feature we have not seen in any printed publications ever before.

Image Source: TheTreeApp

Image Source: TheTreeApp

The technology has been as huge a challenge as all the other components put together. Our team of individuals lead by Herman van den Berg have often missed their weekend totally, along with many nights of very little sleep. It is boastful perhaps, but we have been told that there is no other app in the country that has the complexity, versatility, interactivity and pure pleasure-of-use for its purpose than TheTreeApp. We are very proud of our teams' achievements and all credit goes to Van den Berg 's hand-picked experts, Zekhethu Projects, Gerrit van Niekerk and Roxane Lapa.

▦ There are a few apps out there that are similar to TheTreeApp. What sets it apart?

As previously mentioned, there is no other app, other than Roberts Birds, which has even close to this level of sophistication. Other apps are essentially e-books with limited search and location capabilities. In addition, to some extent, they cover the material using the established scientific language and concepts, which are difficult for users without a competent level of science skill.

▦ How accurate are the identifications?

This is a very simple question with a complex answer - in a nutshell, excellent. However, no system will ever deliver every bird that a birder tries to identify. And similarly identifying every tree in the country (that can grow to above three metres, somewhere within our boundaries) is a mammoth, actually impossible task. Trees are very versatile. In different areas of South Africa, in different seasons and at the varying stages of growth the important features of some trees can range through a radical gamut of shapes and sizes. As hard as we have worked throughout this period to find attributes that are constant and easy to see and record accurately, there will be users who, particularly at first, do not understand what TheTreeApp is 'asking' for. And they will be disappointed. But, if a user commits to some 'play time', even in their own gardens with common trees – and they do not look for a definitive outcome – but rather become at ease and comfortable with the system – we are confident there is no other faster more reliable keying system that will get closer to most IDs, than this app.

⊞ *Tell us about the various applications of the app and how it can be applied to conservation, environmental management, etc. across multiple industries*

The app contains a multiple-level, highly detailed, extraordinarily complex set of data. As the 'to-be-expected system', users can define their search by tree height, tree type, thorns, leaves, flowers, fruit and woody features. In addition, searches can be initiated and followed through by any of the following, or any mixture of the following:

• Location (exact, current or selected, all of RSA, as well as a choice out of 1,400 reserve areas, by province, by name).
• Names by English, Afrikaans and botanical. However, there is an additional specialist search available for names in all 11 South African languages – where they exist
• Status in terms of being indigenous, alien invasive, by Nemba category, or alien and potentially invasive.
• Status; indicating if it is Protected, and/or Endangered or not; and the legal category assigned to this status.
• Status by any knowledge available on it being poisonous to either humans or animals or not.
• Status by its botanical classification of both family and genus.

Applying these tools according to their own needs, any workplace user has an extraordinarily powerful and unique tool to sort the species into categories that may have nothing to do with identification. For example, for any professional in any role in landscaping, gardening, town planning or plant nursery scenarios to be able to sort by location, size of tree, colour of flower, presence of thorns, is a brand new break-through.

⊞ *What does the future hold for this app? What would you like the app and its users to achieve?*

Above all, enjoyment and excitement of a new set of skills that one can acquire with relatively little stress or a sense of being demoralised. We believe that up till now – all but a few specialists or highly dedicated fringe people, have conquered the

discovery of the world of trees in South Africa. Therefore, they are all missing out on a lifetime of simply wonderful experiences. Most of the trees in the natural environments in Africa have changed very little, if at all, from the exact species that were here when humans first started to become civilised. I doubt that our evolution would have been identical if there had been no long-burning fire from wood, no sticks as weapons; no wooden tools, huts, drums, whistles, medicines from bark, leaves, and roots; no fruits or simply shade.

TheTreeApp has taken over 12 years to develop and update with the all the local, relevant tree species. Our intention is to continue to grow our database and enhance the application, as a team, to the best of our abilities. We are also currently looking to incorporate some AI features in the near future.

There is a whole new world waiting for outdoors people to delight in with TheTreeApp.

ABOUT CARI COETZEE

Cari Coetzee is a contributor to Bizcommunity Tourism, Agriculture and Lifestyle.
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