

TAYYEF

THE SOQOTRA NEWSLETTER



The endemic Socotra Scops Owl (*Otus socotranus*). Photo by Martin Rejžek, Socotra Island.

The Birds of Socotra

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EDITORIAL

Dear Tayf Reader,
We are proud to present the 17th issue of **Tayf** (meaning "aloe" in the Soqotri language), a joint work by a wide range of volunteers with a love for Soqatra. As FoS completes its 19th year, we have seen many changes in the Soqatra archipelago since the beginning of the charity. The beauty and the attractiveness of these Yemeni islands remain striking, yet there is also increasing care and concern for the sustainability of local livelihoods and natural resources, the local biodiversity and culture. Therefore, with passion, the organisation continues to emphasize both the importance and the fragility of the essential nature and character of "Yemen's Heart of Dragon's Blood".

In a modest way, the **Tayf** newsletter reflects only a few of the many publications, activities and projects that have appeared on the island over a year's time. Our **Tayf** team has worked hard to compile and translate the content of this year's issue. As this is a selection, even all FoS activities cannot be included in the newsletter. For example, FoS continued the successful Mangrove Restoration activity mentioned in the previous issue, resulting in hundreds of live trees of the Grey Mangrove (*Avicennia marina*) in Ghubbah, realised by the FoS 2015 cyclone relief appeal in collaboration with the Soqotri Al Tamek Association, ARC-WH and EPA Soqatra. Such small activities show an important link in support of local livelihoods, while creating awareness and education opportunities on key issues such as blue carbon solutions and increasing the climate change resilience of local ecosystems. More activities such as the mangrove replantation activity are to come, as FoS announced this year it will provide small grants for natural or cultural activities on the island.

On the last weekend of September 2019, the 18th FoS AGM took place at the beautiful Botanic Gardens of Palermo, on another island: Sicily.

The **Soqatra in Sicilia** event and the associated conference attracted about 80 people including a large international group with many representatives from Yemen. They convened to enjoy photographs, movies and scientific presentations about Soqatra. The meeting was an amazing success due to the tireless efforts of so many volunteers and illustrated the shared interest in Soqatra. Several Soqotri who are conducting their MSc and PhD degrees in European institutions were present at the meeting, and we will congratulate those who have since obtained their degree in Brno, where the next AGM will take place.

In Palermo the UNESCO-FoS Connect2Socotra awareness campaign was launched. The campaign, promoting the uniqueness of Soqatra and informing about the ongoing challenges to biodiversity and livelihoods, connected the archipelago through lectures and expositions to visitors in Palermo, Rome, Brno, Porto, Liverpool, Ghent, Edinburgh and other places.

A brief overview of the **Connect2Socotra** activities is presented in this newsletter. The fruitful collaboration continued in UNESCO-FoS-EU producing an awareness video in the Soqotri language during the ongoing covid-19 pandemic to help the islanders.

In this issue you can find information about a new species of Frankincense Tree recently described from Samha, about reptiles, birds, conservation, activities and projects.

The **Tayf** section for children includes interactive materials and something that has never appeared in the newsletter before – a beautiful comic with drawings especially designed by a very talented artist with a great love for Soqatra. The comic tells the story about two sister species of geckoes. The beautifully drawn story captures the essence of the kind of activities that FoS aims to encourage: communicating scientific outputs that illustrate the importance of the unique biodiversity and culture of Soqatra to people of all ages in and outside of Soqatra. Also in this regard several leaflets have been produced by FoS which are available on the website in English and Arabic, one on freshwater animals and the other on the amazing land molluscs of Soqatra.

This **Tayf** is available in English and Arabic on the website. Previous issues of Tayf and the FoS leaflets on animal and plant groups in both languages are available free for everyone at WWW.FRIENDSOFSOQOTRA.ORG.

The FoS constitution can be found at WWW.FRIENDSOFSOQOTRA.ORG/ABOUT/PDFS/CONSTITUTION.PDF

We hope that in some modest way, the current **Tayf** can contribute to awareness and conservation of the unique culture and nature of Soqatra.

Kind regards,

Your FoS Chairperson



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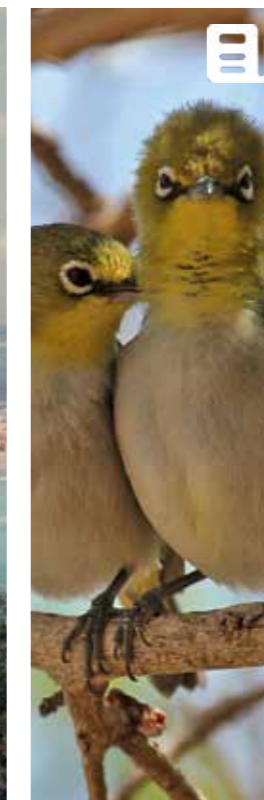
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THE PALERMO MEETING

By Kay Van Damme and Marco Livadiotti

The Palermo meeting created a momentum and positive dynamic among all those attending, sparking further joint efforts to raise awareness on the uniqueness yet fragility of Soqotra's nature and culture, promoting scientific approaches, as well as the challenges, of safeguarding its heritage during times of increased impacts such as climate change which affect our entire planet.

SOQOTRA IN SICILIA

On September 26-29th 2019, the **18th Soqotra Conference and Annual General Meeting of the Friends of Soqotra** was hosted by the Fondazione Internazionale pro Herbario Mediterraneo and the City of Palermo. The overall event Soqotra in Sicilia and activities under the auspices of the Yemeni Government and UNESCO, were themed "Soqotra's pursuit of stability through heritage, conservation and sustainability". A wide range of activities were organised at Villa Malfitano and the Botanic Garden of Palermo in the island Sicily, under the coordination of host Marco A. Livadiotti in cooperation with all of the partners.

The AGM and conference itself are annually organised by the host and FoS on a purely voluntary basis, supported by organisations with a love of Yemen. The event received support through the support by **Sapienza University** under the guidance of the

Director of the Botanic Garden in Rome Dr F. Attorre, the Directorate General for Development Cooperation under the Italian Ministry of Foreign Affairs supported with help by Dr A. Guillet, and the University and Botanic Garden of Palermo with support by the Director Dr R. Schicchi and former Director Dr F. Maria Raimondo. The event was officially opened by the President of the Pro Herbario Mediterraneo International Foundation, H.E. Prince Amadeo di Savoia, Duke of Aosta.

Over the few days of the event, some **80 people** attended (not all are in the group photos) from all over the world, focusing on **science and conservation** in Soqotra. As always, the FoS AGMs are open to anyone interested in scientific talks about Soqotra. A large number of attendees represented academic institutes that are conducting research on Soqotra - the Natural

History Museum in Bern (Switzerland), the Research Centre in Biodiversity and Genetic Resources CIBIO-InBIO (Portugal), Senckenberg Research Institute (Germany), Mendel University (Czech Republic), Royal Botanic Garden Edinburgh (UK), University of St Andrews (UK), and many other institutes sent representatives, including IUCN, UNESCO and FAO.

The conference programme included **16 presentations** over two days where people shared updates on science, projects and conservation efforts on Soqotra. The topics included **Systematics and Evolution, Land Management, Conservation and Development, and Ecology**. Each session was followed by a discussion, with active engagement by the public.

Memorable contributions included remarkable study of island diversification in the unique reptiles of Soqotra by Dr R. Vasconcelos (see an article on the reptiles in this issue). An esti-



Attendants of the FoS meeting in the Botanic Garden of Palermo on September 27th, 2019. (Photo: FoS)

mation of the livestock numbers and grazing pressure was presented by Dr P. Vahalik, and land degradation in Soqotra was also covered by Mr Marcelo Rezende of the Food and Agriculture Organization of the United Nations (FAO). Local management and conservation of the unique frankincense trees *Boswellia* and dragon's blood trees *Dracaena* was presented by Mr S. Hamdiah and Mr A. Al-Okaishi. Dr F. Attorre emphasized the importance of nature's ingenious systems of water collection by the dragon's blood tree forest in Soqotra, which contributes to underground freshwater reservoirs on the island. Miss H. Abdulhalim explained the importance of **sustainable development** as a good practice for disaster resilience, relating to recent cyclone impacts on Soqotra and discussed the FoS/ARC-WH mangrove project. The importance of the **water resources** for conservation and the biodiversity of the unique Soqotran waters were shown by Dr

A. Guillet and Dr Kay Van Damme, respectively. Dr A. Paolini presented the importance of Soqotra as a **Man and Biosphere Reserve** and a **UNESCO World Heritage Site** within the global context. The Soqotri **Culture team**, led by Mr Ali Mahferhin, sent a brief video and movie to greet all attendees in Palermo, from a concurrent workshop at the ARC-WH in Bahrain (venue of the 17th FoS AGM) on the Soqotra Cultural Heritage project, funded by the British Council.

The Yemeni delegation at the Palermo meeting included, in person, representatives of the Embassy of the Republic of Yemen to Italy, of the Ministry of Water and Environment, the Soqotra Branch of EPA Yemen and several Yemeni and Soqotri officials. In total three current ministers attended, among whom the minister of Fish Wealth H.E. Mr Fahd Saleem Kafayen Rafoon from Soqotra and the governor of Soqotra H.E. Mr Ramzi Mahroos. Former minister Dr Abd al-Rahman Fahdl Al-Eryani

was also present, a welcome guest at FoS meetings with an unlimited passion for Soqotri culture and nature. Several Soqotri attended who are pursuing their MSc or PhD degrees at European Universities, including Mr Mazen Aldharde, Mr Sami Mubarak, Miss Ghalya Abdo, Mr Salem Hamdiah, Mr Abduraqueeb Al-Okaishi and Mr Musead Aklan.

As part of the Soqotra in Sicilia event, a number of **side activities** were organised, such as a documentary film fest, discussions, Yemeni coffee and food. The Pier Paolo Pasolini Research Center and Archive curated the documentaries fest. Photographs of Soqotra nature and people were shown in an exhibit by Mr V. Melnik, Mr M. Rezbek, the Catalan film maker Mr Jordi Esteva and Miss C. Martin Chico, set up in the Botanic Garden of Palermo. A playlist of songs and sounds from Soqotra could be heard, recorded and shared by Dr Miranda Morris as well as Yemeni traditional music by Jean

Lambert. The closing dinner involved traditional food by Yemeni chef Mr Taha al-Jalal.

During the **Annual General Meeting** itself, the FoS Committee provided an **update** on the activities and overview of finances of the charity in the past year, including a (self-funded) visit by the FoS Chair person to the Mangrove Replantation Project in the north coast of Soqatra and replantation projects in the Momi area, the latter two projects conducted jointly with ARC-WH. The mangrove replantation activity is a highly successful and sustainable nature activity that emerged from the FoS / ARC-WH cooperation, supported by EPA Soqotra, guided in the field by Mr Ismael Salem from Soqotra and implemented by the local al-Tamek Association for the Protection of the Mangrove Trees, housed in Ghubbah (see Tayf 16). During the meeting, FoS decided to provide very small grants for small yet sustainable local initiatives which can be applied for through

a form on the website (up to 500 USD). Other activities included on-the-ground plastic waste awareness campaigns by FoS and a local NGO in a school in Omak, southern Soqotra.

During the closing ceremony, all Yemeni officials were provided with a re-usable metal **drinking bottle** as a gift from FoS, an awareness tool to emphasize the global need for the reduction of single-use plastic as well as a link to the importance of drinking water resources. These donations were gratefully received.

IMPORTANT OUTPUTS FROM THE MEETING

At the end of the meeting, the attendants formulated take-home messages at the initiative of the Yemeni attendants. These included eight core **suggestions**, translated in English and Arabic for all attendees, on their endeavours to continue protecting the natural and cultural heritage of Soqotra.

Among the recommendations, the attendees expressed a general need to oversee the illegal selling and buying of land, which is a concern in the National Park areas. In addition, a general comment is the need to maintain the stability in Soqotra to enable sustainable development and respond to the basic needs of the people, and at the same time to support sustainable resource use and increase the local capacity to reflect the new challenges to ecosystems that have arisen in recent years.

In addition, important outputs from the meeting included the launch of the UNESCO-FoS **Connect2Socotra** awareness campaign (see the article on this campaign in this issue), and the collection of scientific papers about Soqotra deriving from the Palermo meeting in a **special issue of Rendiconti Lincei**, edited by F. Attorre and K. Van Damme. The **19th FoS meeting** is planned to be held at Mendel University in Brno, Czech Republic, 24-27 September 2020.



Yemeni delegation at the meeting, together with FoS Chairperson, Prince Amadeo di Savoia and UNESCO representative.



Attendants of the 18th FoS meeting at the excursion in Palermo city. (Foto: FoS)

"Today, and despite our efforts, biodiversity loss and nature's degradation are occurring at unprecedented rate and scale around the globe. The Soqotra Archipelago in the Republic of Yemen, although it has been inscribed as a Man and Biosphere Reserve (2003) and Natural UNESCO World Heritage site (2008) is no exception to this trend where its exceptional marine ecosystems and fascinating plant species are in great danger and threatened by climate change, unsustainable use of its natural resources and man-made activities."

Speech by the Director of UNESCO Doha Office, Representative in the Arab States of the Gulf and Yemen, Dr Anna Paolini

The presence of all attendees, including a large group from Yemen and Soqotra pursuing higher education, illustrates the general interest and commitment to conservation and sustainable development of the Soqotra archipelago. We hope that the enthusiasm and energy generated during the meeting will be remembered and may bring good to Soqotra and Yemen.

ACKNOWLEDGEMENTS

FoS and the organisers of Soqotra in Sicilia and the AGM wish to thank all who contributed valuable voluntary

time and effort to the event, all sponsors and the many attendees from all over the world, making it a great success. In particular, we wish to thank volunteers organising the secretariat (Roberta Orlando, Laura Bertini, Filippo Bartoli, Giulia Raimondo), website (Luca Malatesta), designs (Massimo Livadiotti), Arabic translations (Chiara Impagliazzo, Haifaa Abdulhalim), English and Italian editing (Monica Fritz, Laura S. Battaglia), organisers of the logistics for Yemeni attendees (Fabio Attorre, Tullia Riccardi, Michele di Sanctis) and the connect2socotra event (Bruno Bertelli).

MORE INFO:

Friends of Soqotra (/Soqotra)
www.friendsofsoqotra.org

Socotra in Sicilia
www.socotraisicilia.it

FoS Meeting 2020
www.fraxinus.mendelu.cz/tropicalforestry/friends-of-soqotra-19th-conference-and-agm

For the full text of the article, see Van Damme K. & Livadiotti M., 2020. The Palermo Meeting - Socotra's Pursuit of Stability. *Jemen Report* 51: 12-16.



THE DISCOVERY AND DESCRIPTION
OF A NEW SPECIES OF FRANKINCENSE TREE

BOSWELLIA SAMHAENSIS FROM SAMHA

SOCOTRA ARCHIPELAGO

By Paul Scholte
PaulT.Scholte@gmail.com



PHOTO 1. Huge inaccessible boulders with the Samha frankincense tree and the dominant *Euphorbia arbuscula* (26 March 2006, photo Paul Scholte)

INTRODUCTION

Frankincense trees are distributed from Mali in West Africa to India in South Asia (Thulin 2020). With 11 out of 24 species, no other area has a comparable concentration of species of frankincense trees as the tiny Socotra Archipelago with a land surface of just 4000 km². Here I describe the discovery of a new species of frankincense tree from the islet of Samha, some 60 km off the coast of Socotra. Its description - 14 years after the initial discovery and collection in 2006 - was complicated by the reigning political situation, with the Socotra herbarium and its collections no longer accessible and possibly even lost.

THE DISCOVERY IN 2006

In the mid-2000s, the Socotra Conservation and Development Program (SCDP) organized an annual 10-day boat trip to the outer islands of Abdul Kuri, Samha and Darsa, in late March to early April, when the seas are calm. Some 30 staff monitored the marine environment, studied vegetation and waterbirds and provided medical and administrative support to the c. 450 and 150 people on Abdul Kuri and Samha respectively.

On 26 March 2006 a SCDP team composed of Ahmed Saed Suleyman, Abdulraqueeb Al-Okaishi, Mohamed Nageb and Paul Scholte conducted a sea

bird count around Samha. With a small motorboat we went eastward from Samha village around the islet checking the coastline for seabirds. While approaching the southern shore (Photo 3), with seemingly bare limestone footslopes, Paul spotted a boulder with peculiar small trees. Because of the presence of numerous *Euphorbia arbuscula*, we approached the coast further to be sure of our observations and decided to land. We soon found two boulders with dwarf frankincense trees (Photo 1). Access to the boulders was difficult, but Mohamed managed to climb one and collected specimens with fruits (Photo 2).

Upon return to Socotra, Paul contacted Mats Thulin (Uppsala University), the *Boswellia* expert who earlier had described various frankincense tree species from Socotra and Somalia. A few days later he provisionally identified the specimen as *B. bullata* but stressed the need to see flowers to be sure.

THE 2007 OUTER ISLAND TRIP: COLLECTING SPECIMENS WITH FLOWERS

A year later, on 31 March 2007, Paul accompanied SCDP's botanical team ascending Samha mountain to monitor *Begonia samhaensis*. The next day Mohamed Nageb, Ahmed Adeb and Paul continued crossing the plateau and descended to the southwest slopes to locate and collect the Samha frankincense tree. We found a total of seven boulders with an estimated 164 frankincense trees at 100-300 m altitude. The Samha frankincense trees at this time had conspicuous red flowers (Photo 4) and were extensively sampled. Collections were kept for the Socotra herbarium with copies for the Edinburgh herbarium. Assuming the specimen were *B. bullata*, we did not take any further action.

TOP - PHOTO 2. Mohamed Nageb sampling the Samha frankincense tree, with leaves and fruits. Ahmed Saed and Abdulraqueeb hold the wood ladder (26 March, 2006, photo Paul Scholte)

MIDDLE - PHOTO 3. While spotting seabirds along the southern limestone footslopes of Samha (26 March, 2006), we saw small trees on the large boulders, the habitat of the newly described *Boswellia samhaensis*. (photo Paul Scholte)

BOTTOM - PHOTO 4. *Boswellia samhaensis* in flower (1 April, 2007, photo Paul Scholte)



14 YEARS LATER: DESCRIBING THE SPECIES

Since the 1990s Mats Thulin had been working on a monograph of all frankincense species, but only had enough time to dedicate to it after his retirement. In 2008 Mats had received, through a Slovakian colleague, a photograph of the flowering Samha frankincense tree that later turned out to be taken by Mohamed Nageb on the 2007 trip (Photos 6, 7). When working on the description of *Boswellia bullata* and the newly described *B. scopulorum* from north-east Socotra, his interest was attracted by this picture because of the reddish flowers and the inflorescences that seemed to be unbranched racemes, whereas in *B. bullata* the flowers are arranged in branched panicles.

In November 2018, Mats visited Edinburgh where he expected to find material of the Samha frankincense tree. However, no such collections could be found there. In addition, it appeared that the Socotra herbarium was 'not accessible'. Several months later, in October 2019, Mats managed to retrace Paul's contact details, and he subsequently sent him photos of the 2007 observations with flowers, fruits and leaves. This allowed a preliminary description of the Samha frankincense tree in the *Boswellia* monograph. The name chosen, *Boswellia samhaensis*, was already used as nickname for the Samha frankincense tree in 2006. For a formal description, however, herbarium material was needed.

Paul therefore contacted former SCDP colleague Ahmed Saed for access to the Socotra herbarium. Unfortunately, the Coalition Forces had taken the office of the former SCDP and Environmental Protection Council as their base. Despite various efforts, Ahmed Saed did not manage to get access. Paul remembered vaguely that he might have kept specimens of the Samha frankincense tree at home in Amsterdam but, being based in Côte d'Ivoire, he had no immediate access. Luckily, his son managed to trace them. The specimens were sent to Mats, allowing the formal description of *Boswellia samhaensis* in January 2020 and its subsequent publication in the *Boswellia* monograph in April 2020.



TOP - PHOTO 5. *Boswellia samhaensis* (flaking yellow-greenish bark) amongst *euphorbia arbuscula* (grey bark). (26 March 2006, photo Paul Scholte).

LEFT - PHOTO 6. Flowering Samha frankincense tree that alerted Mats Thulin, (1 April 2007, photo Mohammed Nageb).

RIGHT - PHOTO 7. Boulder with Mohamed Nageb taking photo 6 (1 April 2007, photo Paul Scholte).

WHY IS THIS A NEW *BOSWELLIA* SPECIES ?

In their description Thulin and Scholte (2020) wrote : '*Boswellia samhaensis* is apparently closely related to both *B. bullata* on western Socotra and *B. scopulorum* on northeastern Socotra, all three being cliff-dwelling species with imparipinnate, more or less bullate leaves, petals that are pubescent outside. They all have very small areas of distribution...'. *B. samhaensis* differs from *B. bullata* by its "reddish (versus yellowish) flowers and the narrowly but distinctly winged (versus unwinged) pyrenes" ('the fruit pit'), and from *B. scopulorum* by "having the flowers arranged in compact racemes or shortly branched panicles (versus panicles with long, spreading branches), ...'.

The new *Boswellia* descriptions open exciting possibilities of further study of the origins and incense characteristics of the 11 species of frankincense trees of Socotra in relation to their mainland relatives and look-alikes, especially those from nearby Somaliland and Puntland.

AND NOW SOMETHING COMPLETELY DIFFERENT

After checking with Abdul Raqueeb and Ahmed Saed, Paul communicated to Mats that after the description, the type specimen could stay in the Uppsala herbarium which already had a wide range of *Boswellia* specimens. It raises, however, the question of how to assure access of Socotri and Yemeni botanists to the collections from their island and country which are increasingly dispersed over (overseas) herbaria. It would be important to develop a centrally accessible digital database of Socotri and Yemeni specimens, allowing direct access to the specimens instead of having to pass through several individual herbarium sites.

ACKNOWLEDGMENTS

Ahmed Saed Suleyman and Abdul Raqueeb Al-Okaiishi for the continuing collaboration and friendship. Mats Thulin and Frans Bongers for commenting the manuscript.

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Thulin, M. and P. Scholte. 2020. *Boswellia samhaensis* pp. 106-109 in Thulin, M. 2020.

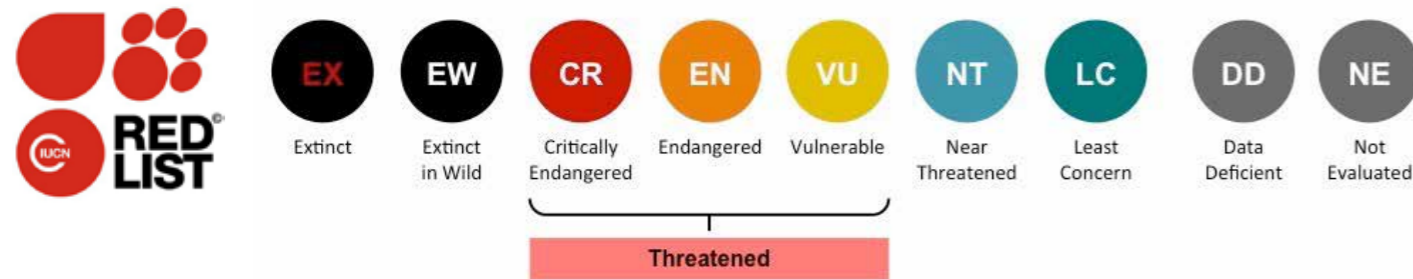
IUCN RED LIST CATEGORIES

By Kay Van Damme

Assessment of species for the IUCN Red List is done carefully by specialists for each group, sometimes during special workshops, and then evaluated and peer reviewed by other specialists through a complex procedure, using all data available for the species. The idea is to provide a very simple scale of extinction risk for species in a standardized way. An important part of the process is that, in most cases, threats should be determined and evaluated. Estimations of areas of occupancy and population sizes should be included. When more data become available, the status of a species needs to be updated, and may change (in either a higher or lower status). As can be seen below, sometimes a lower category like LC, may still be a species of which the population trend is considered as decreasing (like the Socotra Sunbird)!

The red listing forms a major tool in the conservation of species worldwide. However, it is sometimes also misused by governments when species have a low or no category. This may actually sometimes be due to a lack of updates by specialists rather than the absence of a real threat.

The largest groups of Soqotran endemics (and non-endemics with significant populations) in the IUCN Red List are plants, reptiles and birds. Specialists are now in the process of re-assessing several of the plants of Soqotra (RBGE/CMEP), and to do this right, it takes time! Others are red listing insects (Felix, R., pers. comm.)



THE CATEGORIES ARE:

- NE** NOT EVALUATED - not yet evaluated against the criteria
- DD** DATA DEFICIENT - not enough data to make an assessment of its extinction risk
- LC** LEAST CONCERN - lowest risk, does not qualify for risk categories
- NT** NEAR THREATENED - likely to become endangered in the near future
- VU** VULNERABLE - high risk of becoming endangered in the wild
- EN** ENDANGERED - high risk of extinction in the wild
- CR** CRITICALLY ENDANGERED - extremely high risk of extinction in the wild
- EW** EXTINCT IN THE WILD - known only to survive in captivity
- EX** EXTINCT - no known individuals remaining



Cadaba insularis listed as Critically Endangered (CR), photo by Petr Maděra



Angkalanthus oligophylla, an endemic species of a monotypic genus from Socotra, listed as Endangered (EN) photo by Petr Maděra

EXAMPLES FROM SOQOTRA:

PLANTS

- Dracaena cinnabari*** (Socotra Dragon's Blood Tree) VU (needs updating)
- Dendrosicyos socotranus*** (Cucumber Tree) VU (needs updating)

BIRDS

- Chalcomitra balfouri*** (Socotra Sunbird) LC (population trend: decreasing!)
- Buteo socotraensis*** (Socotra Buzzard) VU (population trend: stable)

DRAGONFLIES

- Azuragrion granti*** (Socotran Bluet) NT (population trend: stable) (needs monitoring)

REPTILES

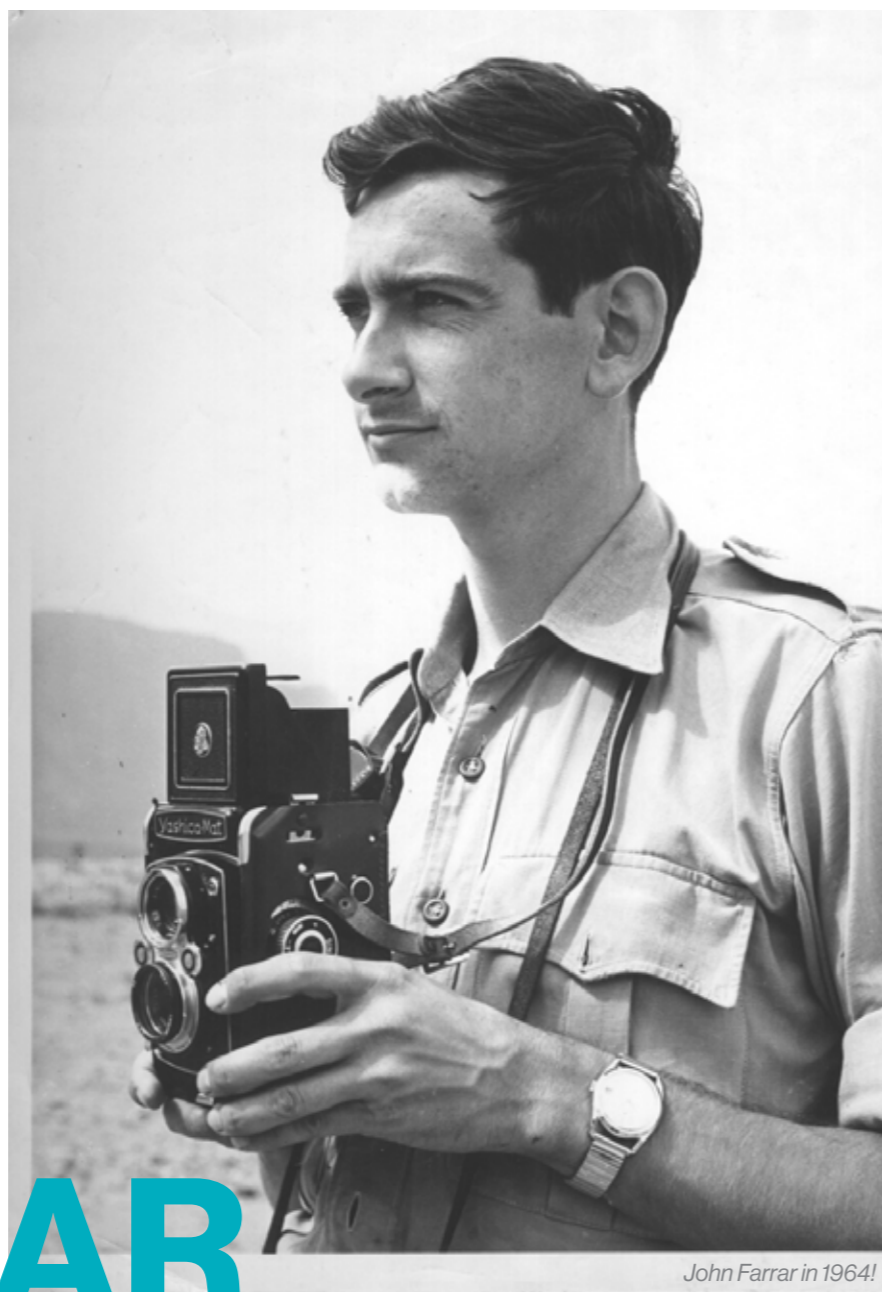
- Hemidactylus dracaenacolus*** (Socotra Dragon's Blood Leaf-toed Gecko) CR !! (population trend: decreasing!)



RECOLLECTIONS OF SOQOTRA IN 1964:

AN INTERVIEW WITH

JOHN FARRAR



John Farrar in 1964!

By Lisa Banfield

John Farrar is a British photographer who spent two months on Soqotra in 1964 and revisited in 2003 and 2004. He has kept a keen interest in news from the island, was a Friends of Soqotra member for 10 years, and for several years maintained his own Soqotra website. Here he shares some of his memories and impressions of the island and its people.

When and how did you end up on Socotra and how long were you there?

I joined the Royal Air Force in 1961 and trained as a photographer. I was posted to R.A.F. Episkopi, Cyprus, in July 1962 (with my new wife). In early 1964 I heard that Captain P. Boxhall was organising an expedition to go to Socotra. I contacted him immediately and he confirmed my place on the team. We left Episkopi in December, 1964 for Aden where we spent four days getting provisions and then flew out via R.A.F. Riyan (Mukulla). We would be on the Island for two months.

What were the living conditions and diet like?

Our camp was set up about one mile inland from the village of Suq which is east of Hadibo. We had tents for sleeping, two in each. The diet consisted almost entirely of Army compo rations. Most of the food was in tins and that was OK for about two weeks and then it got boring, so would buy rice and fish in Hadibo and add that to our meals. There were no fresh vegetables or fruit. There were dates, however.



"Cliff path to Hadibo" and "Path to Hadibo" where a road has now been cut through the cliff.



John Farrar on the cliff path carrying provisions to the survey team.

What were your first impressions of the island?

I had read Douglas Botting's book *Island of the Dragons Blood Tree* before we left Cyprus so I knew we were going to a very primitive place. No running water, no electricity, no roads. The only communication we had was the Army radio station and my amateur radio station. (I have always been interested in short wave radio and this was the first such operation from the Island.)

Did you travel to different parts of the island?

The main aim of the expedition was to make a geographical survey of the Island and I was not part of that team, my role was only to photograph them at work. I carried provisions from the camp to a base camp set up at Quadhub which was quite a walk with a heavy load.

Goba was another base camp which is further along the coast, about 20 miles from Hadibo, which we walked in a day! We arrived in total darkness and could not see the hut, so we lay on the ground and went to sleep where we stood. Happy days.

What made Socotra different from other places that you'd travelled?

Socotra was/is like no other place I have ever visited. In 1964 the lack of any modern facilities was very evident and made us adjust to a different way of living. Now there are most of the trappings of modern civilisation, at least around Hadibo. The remainder of the Island is much like it was in 1964, apart from the roads and trucks which make travel between villages so much quicker. We had to walk.

I was also tasked to try to photograph war graves at Mouri where the airport is now. I did not find any graves but did find relics of WW2 aircraft. I think Capt. Boxhall expected me to find the graves of airmen killed in a plane crash during the War. I have since discovered that their bodies were exhumed and reburied in Aden.



What was your impression of the people and how did they react to you?

My impression was how friendly they all were. On a long walk past Mouri I ran out of water. A villager led me some distance to a well where he gave me water. I used my sterilising tablets of course. I gave him some cigarettes in return and we parted good friends.

Is there anyone who particularly stands out in your memory and, if so, why?

I met Wazir Ibrahim a few times and found him a very friendly man. When I returned to Socotra in 2003 I had some pictures of Ibrahim which I showed to locals in Hadibo. I was told that Ibrahim had been shot years earlier. I was taken to see his son and was able to give him the photos of his father. That was special.

When you returned to the island in 2003, what were the biggest changes that struck you first?

The biggest change was that I arrived on the Island in a jet airliner on a tarmac runway and at an airport. In 1964 we arrived in a R.A.F. Blackburn Beverley freight aircraft onto the very stoney 'runway' near Suq. The next biggest change was that we were driven to Hadibo along a tarmac road. In 1964 that would have been a four hour walk along a very rocky cliff path.

The next big change was that we were staying in a hotel - i.e. no tents. I walked into the Summerland Hotel and some lads were watching a football match on TV. It was an Arsenal match I had watched at home two weeks earlier. Certainly, a LOT had changed.

Were the people any different in 2003 than they were in 1964?

In Hadibo certainly. It was obvious they were healthier, better clothed, educated and knew much of the outside world. The children and young adults were very friendly and wanted to know what I knew. I showed them photos from 1964 and they were fascinated. People away from Hadibo were again more aware of Westerners but were still living in very poor conditions.

Did you notice any changes in the environment?

Not particularly. The temperature was about the same, 80F and breezy. In 1964 we had a very heavy rain storm which nearly flooded the camp but not in 2003 or 2004.

How long have you been a member of Friends of Soqotra and what is its value to you?

I was a member of FoS for about 10 years and was Treasurer for a few. Some years ago I closed my website on the Island as I could no longer add anything to it. Then I decided to leave FoS as I was no longer able to contribute in a positive way and much of the discussions were over my head, not being in the scientific community. I still like to read Tayf though and keep abreast of happenings on the Island.

I revisited Socotra in 2003 with a French film crew and again on 2004 with Peter de Geest, the latter visit being a much better experience. Thank you for that Peter (One day he is coming to Cornwall to visit!).

All Photos taken by John Farrar

TOP LEFT - "Goba" This village has moved inland since 1964

MIDDLE LEFT - "Hadibo boys" shows how 'poor' they seemed in 1964.

BOTTOM LEFT - "Hadibo boys" shows the change from 1964 to 2003.

TOP RIGHT - "HBL" Hadhrami Bedouin Legion garrison who we became very firendly with. Shared meals etc.

MIDDLE RIGHT - "Beverley lands to take us home" The Blackburn Beverley arrives after two months on the Island it was a welcome sight.

BOTTOM RIGHT - "Ibrahim" The first morning on the Island greeting Wazir Ibrahim with his brother, the Executioner, behind.

BOTTOM RIGHT - "Modern living" How times have changed. Hotel and road vehicles.

MICRO-HOTSPOTS FOR CONSERVATION:

AN UMBRELLA TREE SPECIES FOR THE UNIQUE SOCOTRAN REPTILE FAUNA

Raquel Vasconcelos ^{1,2,*}, Eudald Pujol-Buxó ³, Gustavo A. Llorente ³, Ahmed Saeed ⁴ & Salvador Carranza ²

Umbrella species are defined as species that can be rare and sensitive to human disturbance, whose protection may confer the protection of other co-occurring species. The dragon's blood tree *Dracaena cinnabari* Balf.f. was already considered an umbrella species on Socotra Island due to its ecological importance for some native biota.

We studied the reptile community living on *D. cinnabari* from Socotra Island. We sampled reptiles on trees across most *D. cinnabari* populations to check if the presence of reptiles on *D. cinnabari* populations was random or structured. Regardless of its patched and scarce actual distribution, we report the use of this tree as a habitat by more than half of the reptile community (12 endemic reptiles, see Fig. 1). Co-occurrence and network partition analyses demonstrate that this community is structured across the distribution of dragon's

blood trees, reflecting complex distribution and biotic interaction processes. Hence, these trees act as micro-hotspots for reptiles, that is, as areas where endemic and rare species that are under threat at the landscape scale co-occur.

This Socotra endemic tree is currently threatened by overgrazing, overmaturity, and climate change. Its protection and declaration as an umbrella species for vertebrates are expected to benefit the reptile community and to protect evolutionary processes that are partially driven by the ecological links between reptiles and this tree. To our knowledge, no tree species has been proposed as an umbrella species for island vertebrate endemics so far, highlighting the ecological uniqueness of Socotra Island.

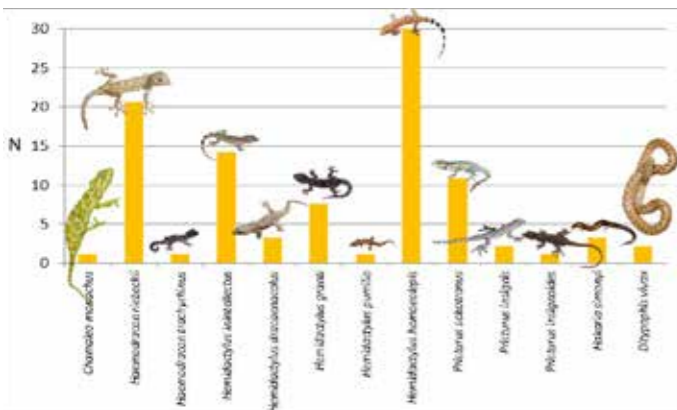


Fig. 1. Number of Socotran reptiles found on *D. cinnabari* trees (photos by Edoardo Razzetti and Roberto Sindaco).

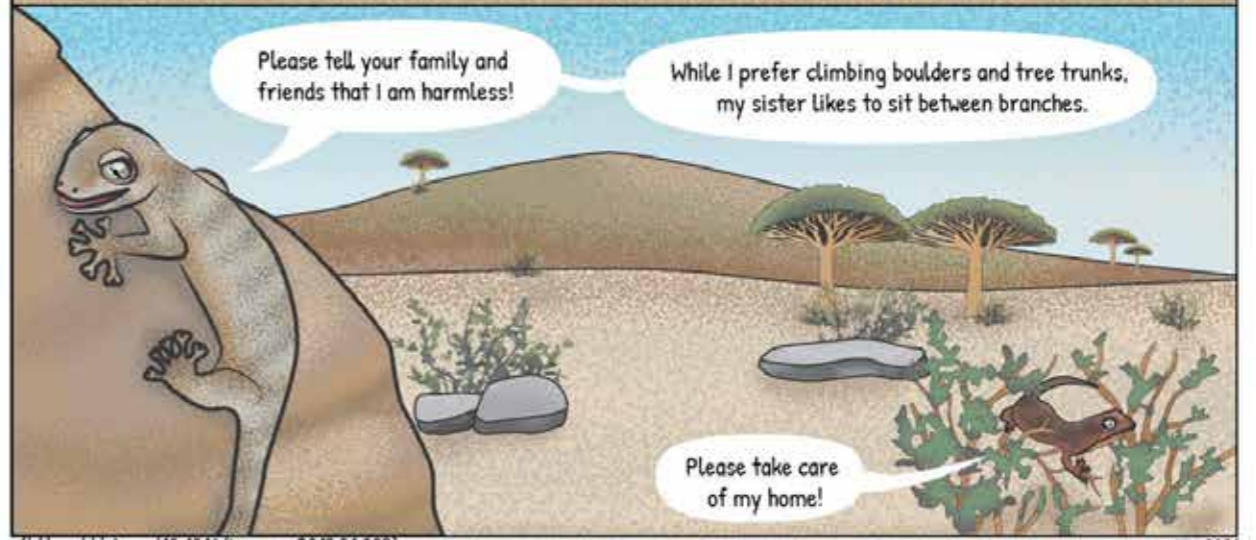
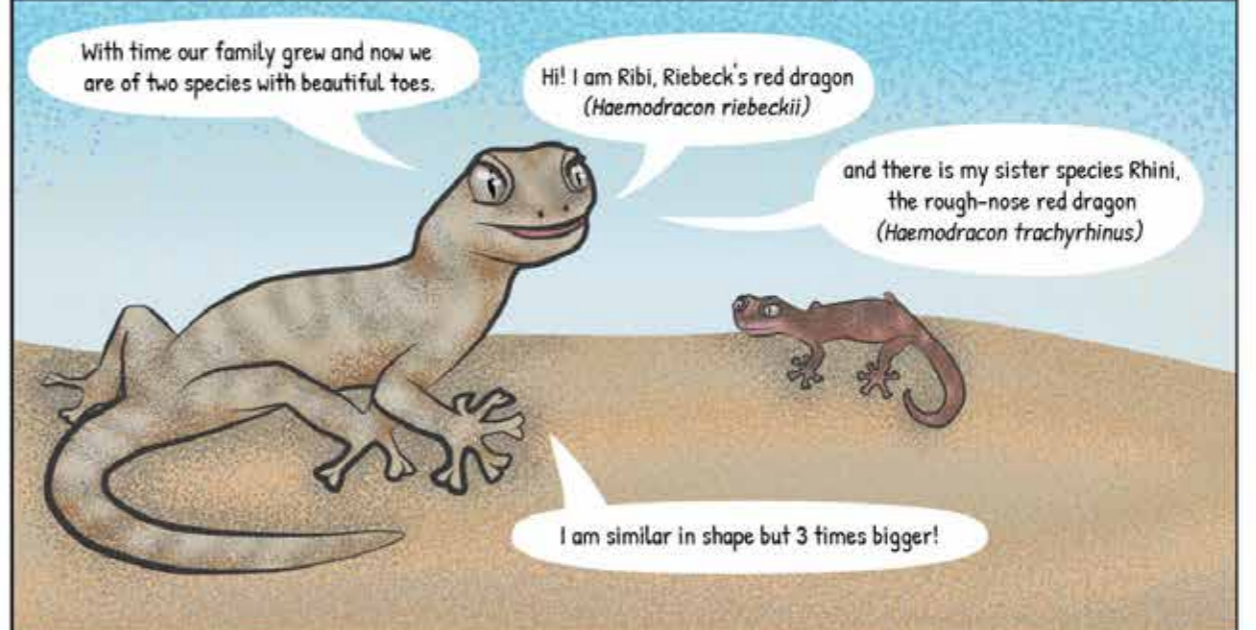
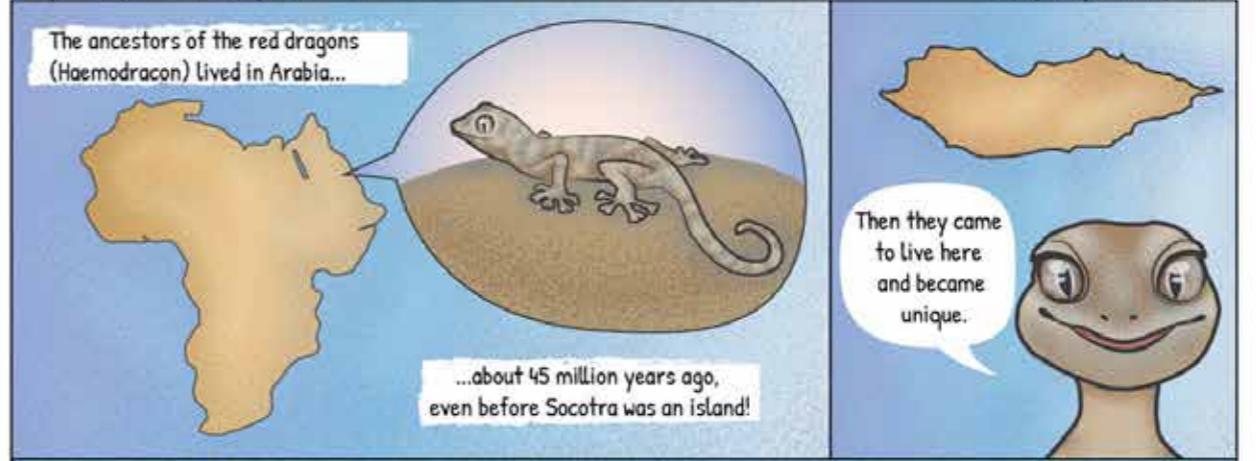
MORE INFO:
 Vasconcelos, R., Pujol-Buxó, E., Llorente, G. A., Saeed, A. & Carranza, S. (2020). Micro-Hotspots for Conservation: An Umbrella Tree Species for the Unique Socotran Reptile Fauna. *Forests*, 11(3), 353.

¹CIBIO, Centro de Investigação em Biodiversidade e Recursos Genéticos, InBIO Laboratório Associado, Universidade do Porto, Campus Agrário de Vairão, R. Pe. Armando Quintas, Vairão, 4485-661, Portugal; raquel.vasconcelos@cibio.up.pt
²Institut de Recerca de la Biodiversitat (IRBio), Universitat de Barcelona, Passeig Marítim de la Barceloneta 37-49, Barcelona, E-08003, Spain; salvador.carranza@ibe.upf-csic.es
³Departament de Biologia Evolutiva, Ecologia i Ciències Ambientals and Institut de Recerca de la Biodiversitat (IRBio), Universitat de Barcelona, Avinguda Diagonal, 643-645, Barcelona, 08028, Spain; epujolbuxo@ub.edu; (E.P.-B.) gllorente@ub.edu; (G.A.L.)
⁴Environment Protection Authority, Socotra Branch, Hadibo, Socotra, Yemen; qamhem@yahoo.com

CHILDREN'S SECTION

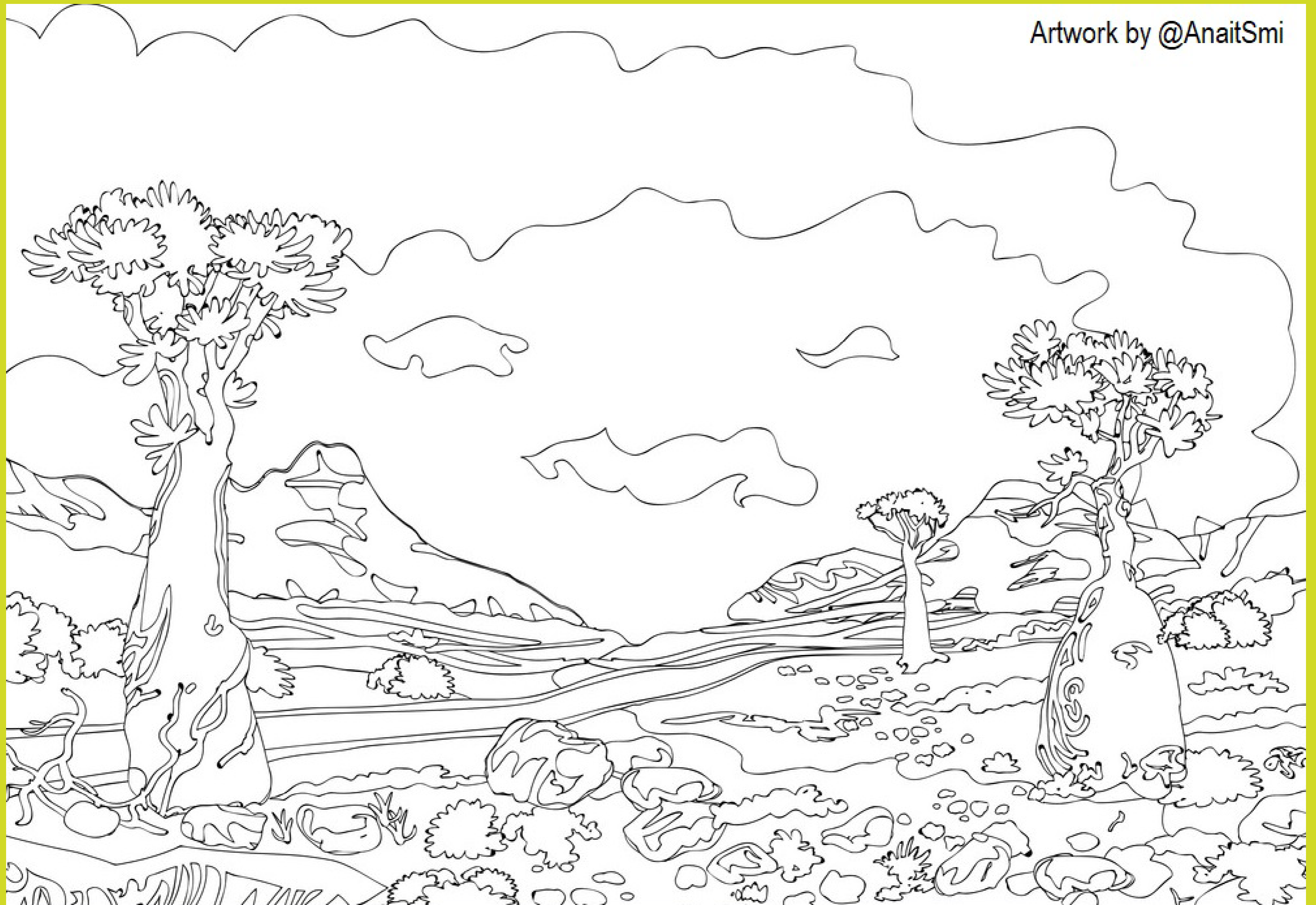
GECKOS OF SOCOTRA *Haemodracon* geckos

Adapted from the article by Tamar et al. 2019 Text by: Raquel Vasconcelos



(https://doi.org/10.1016/j.ympcv.2019.01.009) KH 2020

Artwork by @AnaitSmi

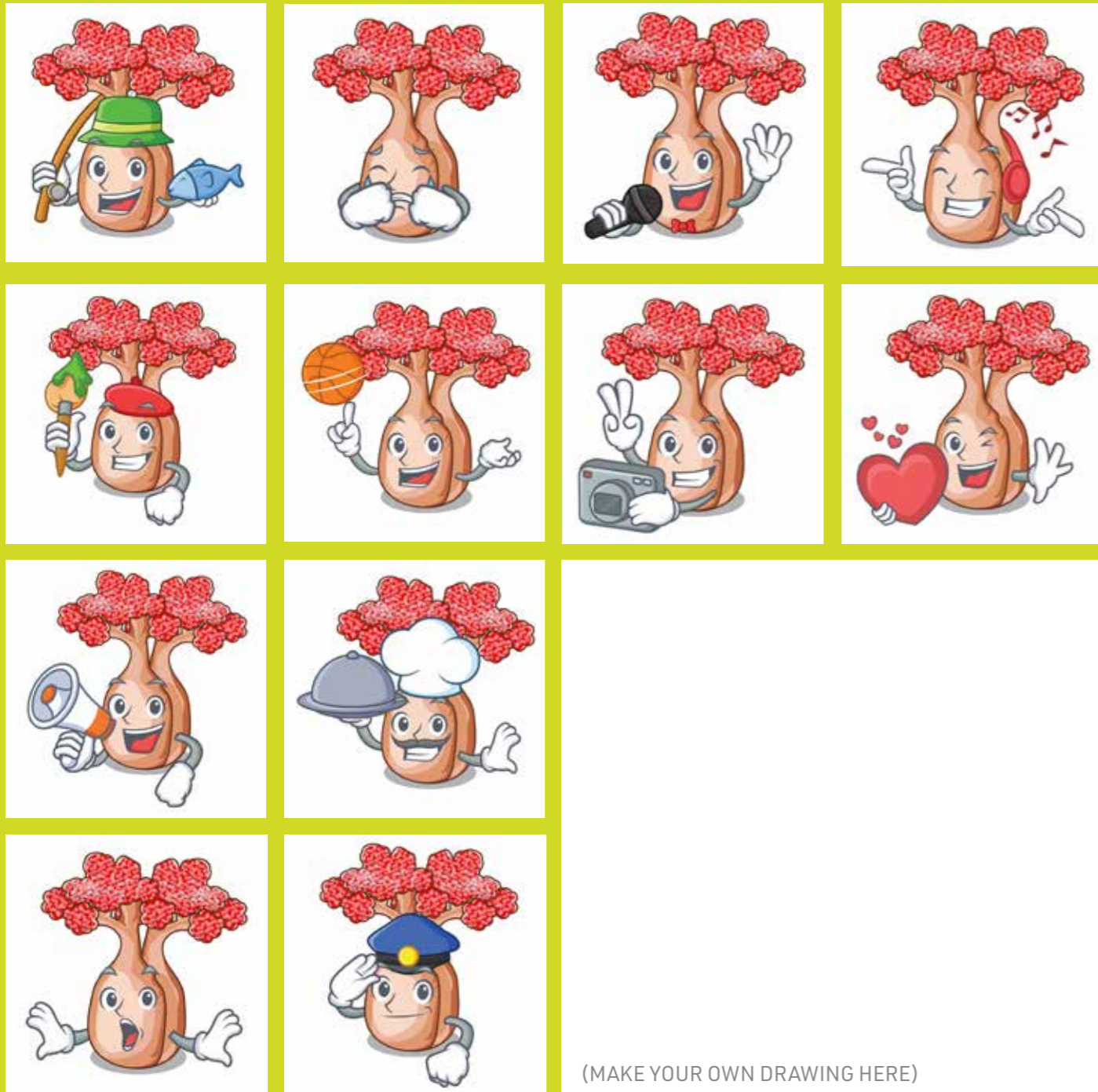




Meet the Soqotra Desert Rose, a beautiful bottle tree found all over the island! Like people, each tree has its own story.

CAN YOU CREATE YOUR UNIQUE STORY IN SOQOTRI LANGUAGE ABOUT THE BOTTLE TREE?

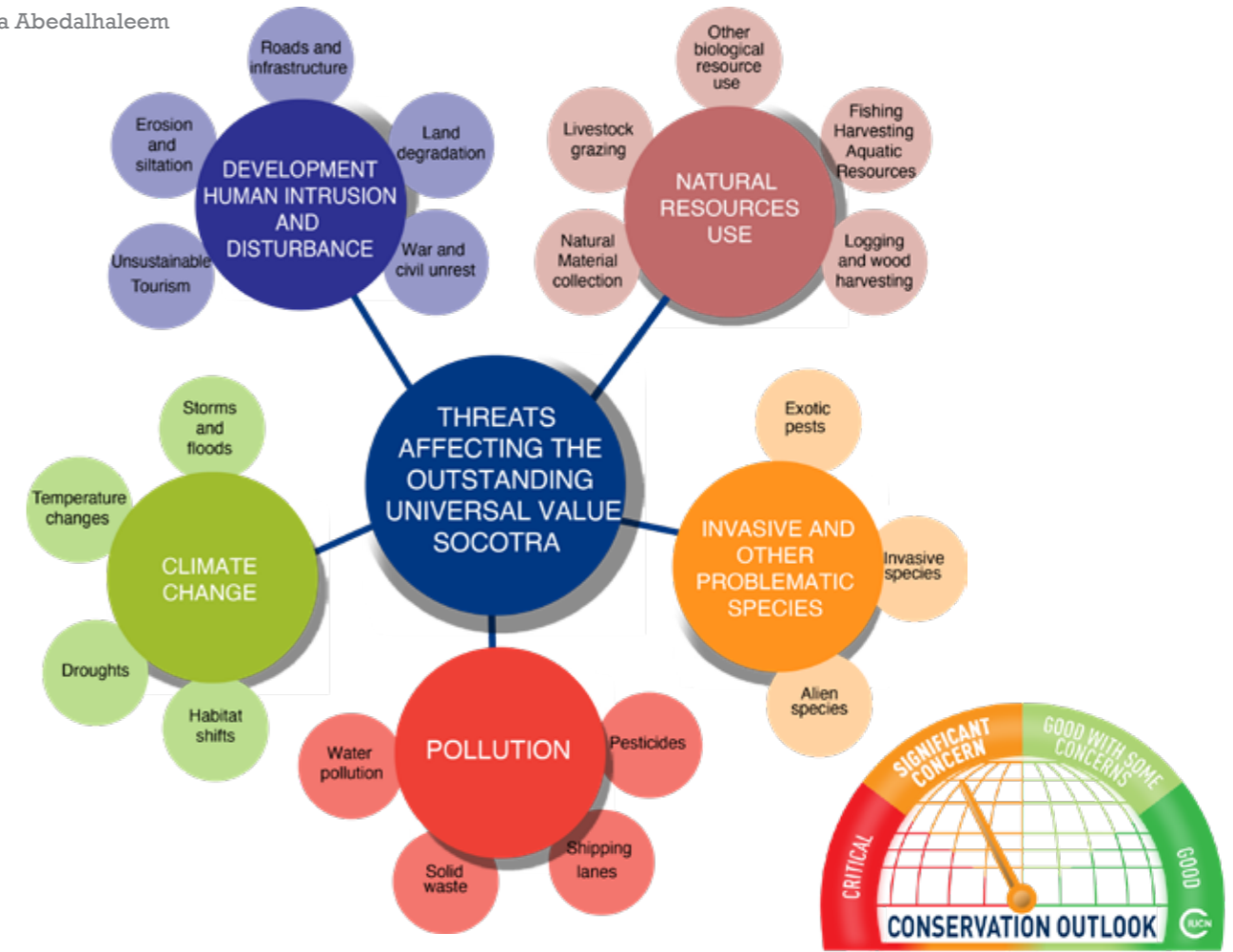
1. Can you guess all the emotions, traits and skills below for the bottle trees in Arabic and Soqotri?
2. Circle the images that are closest to who you wish to be. If you don't find it, can you make your own drawing in the same way as the tree?
3. Can you make a story about the tree by combining different images, in Soqotri language? You can cut the images to make your story and use as many as you want!



Source: royalty free - from Vectorstock

SOCOTRA CONSERVATION STATUS IUCN WORLD HERITAGE OUTLOOK

By: Haifaa Abedalhaleem



In 2008, the World Heritage committee inscribed Socotra Archipelago in the UNESCO World Heritage List under criterion (x). Since the inscription, the site has been facing increasing threats; these range from unsustainable development to the increasing abandonment of the traditional management of natural resources, in addition to the uncertainty of the political atmosphere.

Due to the rapid ongoing socio-economic changes as well as the deteriorating ecosystems in socotra, particularly affecting the endemic flora and marine ecosystems, the IUCN IUCN World Heritage Outlook assessment (based on the state of conservation reports, reactive monitoring mission, government and experts feedback), concluded that the conservation status of socotra is highly concerning and deteriorating.

The IUCN World Heritage Outlook assessment of the conservation status is a tool developed by IUCN in 2011 to provide an independent assessment of the state of conservation of the natural values of the World Heritage Sites and their potential to be maintained in the future. The IUCN World Heritage Outlook of socotra is updated every three years.

MORE INFO:
 WHC- UNESCO Socotra Archipelago
<http://whc.unesco.org/en/list/1263/documents/>
 and IUCN World Heritage Outlook
<https://worldheritageoutlook.iucn.org>



We are ready to switch on an intense spotlight to illuminate all the incumbent dangers to Socotra's rich natural and cultural heritage!



OPENING SPEECH AT THE 18TH FOS AGM AND CONFERENCE, PALERMO BOTANICAL GARDEN, SEPT 26TH 2019

HIS EXCELLENCY PRINCE AMEDEO, DUKE OF AOSTA

To FoS, to the Yemeni Authorities, to all Supporters and their respective organizations

By the President of the International Foundation pro Herbario Mediterraneo (Palermo)

The island of Socotra, although less extensive than our island of Sicily, has been fortunate enough not to have endured anthropization, which would have surely affected and transformed its natural features. Its environment has been preserved almost intact and as a result its extraordinary biodiversity as well. In particular, its biodiversity has evolved undisturbed, bestowing on humanity a biological heritage of exceptional value. For centuries, from this island immersed in the waters of the - not always peaceful - Indian Ocean, have come coveted resins such as incense, myrrh and cinnabar. The local communities derive these products from native plants, such as the magnificent *Dracaena cinnabari* (Dragon Blood Tree), simulating intense exchange and abundant trade. Socotra's unique landscape has been constantly shaped, not by man, but by Nature. Man has remained on the sidelines and has respectfully utilized only what was needed for survival. It is for this reason that the landscape on Socotra has remained physically and biologically intact. Reversing the island's natural state by introducing factors of disturbance is concerning to everyone; those who have had the opportunity to visit the island or those who have read about or seen photographic evidence shown during diverse meetings. Therefore, we welcome occasions like this one to draw attention to the island of

Socotra and its archipelago, seemingly remote in that expanse of ocean beside the Horn of Africa. We are ready to switch on an intense spotlight to illuminate all the incumbent dangers to Socotra's rich natural and cultural heritage!

The conference in Palermo - enthusiastically supported by our Foundation and various other organizations - constitutes an important opportunity to meet, discuss and exchange ideas; not to criticize something or someone; and raise the awareness of communities and governments to ensure that the common good is defended and preserved over time by finding and following the most suitable and straightforward paths.

To the 'Friends of Socotra', attending authorities, representatives from the Yemeni and Socotra Communities, those present and the supporters of the event "Socotra in Sicilia" - I welcome you and wish you every success in your work.

Pantelleria, September 2019

Kindly translated from Italian by Tullia Riccardi.
Palermo Sept 26th 2019

MORE INFO ON THE FOUNDATION, SEE www.fondazioneherbariomediterraneo.org



AS THE CUCKOO FLIES

By Richard Porter

On 27 November 2019 something rather special happened. A Cuckoo *Cuculus canorus*, hatched from an egg in Mongolia, flew over Socotra on its long migration to Africa. How do we know this? Well, in June that year, in a village in Mongolia, scientists fitted three Cuckoos with PTTs (Platform Transmitter Terminals), otherwise known as satellite tags, so that their migration routes could be tracked from their breeding site to their wintering haunts in Africa – and back again. A distance of over 27,000 km.



Namjaa's route across Socotra in November on his way to Africa for the winter.



The Cuckoo named Namjaa

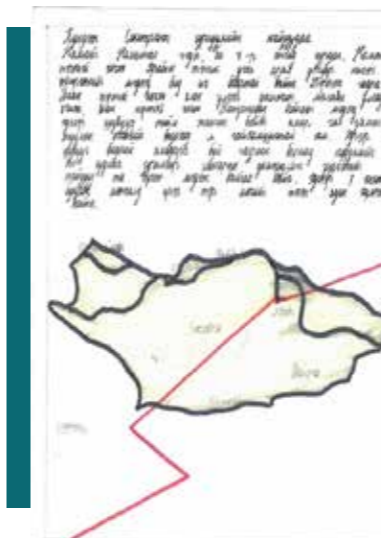
In this story Socotra features prominently, but let's go back a step. The school children in Mongolia, where the cuckoos were caught, gave each bird a name.

The one that flew over Socotra in November was named 'Namjaa', which means 'Storyteller' in Mongolian folklore.

We cannot be sure, but Namjaa probably landed on Socotra in the Haggier woodlands on its way to Africa. On my visits to Socotra I have seen cuckoos in these mountains in October and November and I am sure that the wooded slopes are important, safe resting places where these long-distant travellers can stop and feed on caterpillars, a favourite food.



Mongolian children voting for naming the cuckoos.



When the Mongolian children learned that one of their cuckoos had migrated over the remote Yemeni island of Socotra they decided to write to the Socotran children and here is one of the letters (with a translation):

Dear Socotran school friends
How are you? My name is Nomingoo. We are delighted to know that Namjaa, the cuckoo, flew over your special island in the Arabian Sea. We also learned that the Bayan crossed many countries reached Malawi and Onon is now in Tanzania. It is just amazing, to imagine how these little birds went that far. As you may know those birds get caught in Mongolia, where we live and fitted with a satellite tag, so we could track their long migration. We look forward to seeing these 3 cuckoos back in Mongolia. We send our good wishes for 2020
Highschool, Binder village, Mongolia

In return the Socotran children replied and here is one of their letters (translated by Akarim Nasher):

To our friends, school children in the villages of Binder and Khurkh.
My name is Nawwaf. I study at 30th November School in Hadibo, Socotra. Thank you for your letter, we are also proud of Namjaa who visited us in Socotra. The teacher read your letter from Mongolia. We hope Namjaa will return again and fly over Socotra on his way back to Mongolia. I hope you can visit Socotra and enjoy the unique biodiversity of trees and birds, such as the dragon blood tree.
Drawing by Assim Mohammed Saeed



Namjaa reached Africa, but sadly after a few weeks his satellite tag stopped sending signals. Maybe it died, or perhaps (let us hope) the tag just failed to work and Namjaa is safe. Inshallah!

But all is not lost. The other two cuckoos, named Onon and Bayan, that flew to Africa with Namjaa, started their return journey to Mongolia in April and sometime on 1 or 2 May, Onon flew over Socotra and, on 3rd May, Bayan flew to within 100km of the island. Although they navigate mostly by star patterns, the sun and the Earth's magnetic field, Socotra is probably an important landmark to guide migrating birds, such as these cuckoos, back safely to their breeding grounds.

On their long journeys these cuckoos will have visited 21 countries. If we are to give them the protection they deserve we must make sure that we have a safe and healthy environment - as important for birds as it is for people.

These cuckoos have also been wonderful ambassadors - bringing children together from different cultures in distant countries!



The two Cuckoos, Onon and Bayan migrate across the Arabian Sea - with their sights on Socotra - on the way back to Mongolia.

ACKNOWLEDGMENTS. This study is being undertaken by the Mongolian Cuckoo Project Team and full details, including their sponsors can be found on: www.birdingbeijing.com/the-mongolia-cuckoo-project
This is regularly updated with news of the project – and the cuckoos.



SCIENTIFIC PAPERS

ABOUT SOQOTRA (2019)

By Kay Van Damme

For readers of the Tayf newsletter, here is a selection of scientific papers about Soqotra that appeared in academic journals and books in the year 2019. Many of the authors include members of FoS who contributed to these studies as part of the work they carry out in their institutes. Several studies include authors from Soqotra and Yemen, but not enough. I wish to encourage all researchers who publish about Soqotra to actively acknowledge and involve Soqotri colleagues, where possible, as part of the research. This is vital to capacity building on Soqotra and to scientific collaborations. Also, I wish to encourage Soqotri to actively pursue higher studies and contribute to the science and conservation of Soqotra, and wish for all for the enthusiasm and the possibilities this can provide.

1. BOTANY

As part of a long tradition in conducting botanical studies about Soqotra, botanists of the Royal Botanic Garden of Edinburgh (UK), Felicity Anderson (now at the University of Edinburgh) and Sabina Knees wrote about a little known, yet beautiful endemic tree species from Soqotra, *Vachellia pennivenia*, formerly named *Acacia pennivenia*. The article appeared in the Edinburgh Journal of Botany. The tree is not well known and it has been assessed as Near Threatened (since 2004) in the IUCN Red List. The tree is threatened by drought and its use as fodder in dry periods. According to the Ethnoflora by Miller and Morris, it is named tom'hor in Soqotri or 'little dates'; it is known to be attractive to bees and termites. Small amounts of the leaves are sometimes fed to sickly camels.

A new book, entitled "*Biology of Genus Boswellia*" appeared in 2019, published by Springer. The Omani authors Al-Harrasi et al. include notes on general biology and genetics of frankincense trees. A few species from Soqotra are discussed in context. Related to the latter work (although not for 2019), a comprehensive monograph on *Boswellia* was written by Mats Thulin (2020) from Uppsala University (Sweden), published in *Symbolae botanicae Upsalienses*, entitled "**The Genus *Boswellia* (*Burseraceae*): The Frankincense Trees**". The latter includes several new species from Soqotra – one of which discussed in an article by Paul Scholte in this Tayf issue.

Three studies appeared on biological and ecological characteristics of the best studied plant on Soqotra, *Dracaena cinnabari*. The data is crucial for conservation of this endangered flagship species. The studies were carried out by researchers at Mendel University in Brno, Czech Republic. Two studies in the journal *Biología*, included monitoring growth of seedlings in different conditions (Maděra et al.) and sap flow in a mature tree (Nadezhina et al.), both essential to understanding the species. The study on sap flow provides insights into how the species can extract water from fog, yet is susceptible to prolonged droughts. The latter paper includes a Yemeni author living several decades on Soqotra, A. Al-Okaishi. The studies by Maděra et al. are discussed below under conservation.

2. TERRESTRIAL ZOOLOGY

2.1. INVERTEBRATES

A group of researchers from KSA and Germany led by Yehya Alattal, collected and characterised honey bees from Soqotra using morphology and genetics. The study appeared in *Bulletin of Insectology*. To their surprise, the authors noted that in 94% of the studied samples, the bees are not *Apis mellifera jemenitica* from Yemen, but *Apis mellifera litorea*. The latter populations are widespread along the eastern coast of tropical Africa from Mozambique to the southern tip of Somalia. Honey is a very important traditional resource on Soqotra, and now we know that the honey bees came from Africa, not Arabia.

A first checklist of all beetle species known from the archipelago was compiled by Czech researchers Jiri Hajek and Jan Bezdek in *Zootaxa*. They counted a total of 516 identified species, of which 47% are considered endemic. The authors suggest that many more endemic species will be described in the future. Already three new species should be added to the list.... a new genus of darkling beetles (*Socotrphanes* with *S. kralli* and *S. dementor*) was described in *Annales Zoologici* by Maxim Nabozhenko and Lubos Purnhart, and in the beautiful chrysomelid beetle family, Italian researchers described *Blepharidina socotrana* (Biondi et al. in *Acta Entomologica Musei Nationalis Pragae*). The species is found in an endangered habitat, a woodland with frankincense trees (*Boswellia ameero*).

Among the crustaceans, two new remarkable cave animals were described from Soqotra island by Italian (Roberto Argano and Giuseppe Messina) and Belgian researchers (Kay Van Damme). Both species are named in honour of Stefano Taiti, a kind Italian taxonomist who studied the isopods from the archipelago. *Stenasellus taitii* is a blind and pink beautiful freshwater animal, only found in one cave on Soqotra so far. The little (ca. 3cm long) isopod was discovered during the Belgian cave expeditions of the Soqotra Karst Project. The second species, *Styogocyathura taitii* occurs in brackish wells along the north coast of Soqotra and shows close similarities to a species from New Caledonia. The studies appeared in *Zootaxa* and *Tropical Zoology*. Such special cave animals are known to be sensitive to changes in water tables and pollution.

2.2. REPTILES

Two papers about Soqotran reptiles in 2019 in the journal *Molecular Phylogenetics and Evolution* by a well-established group of evolutionary biologists, mainly from the Institute of Evolutionary Biology in Barcelona (Spain) led by the enthusiasm of S. Carranza and (for the gecko paper) including R. Vasconcelos from CiBIO-INBio Porto (Portugal). The first study is about lizards, the second about geckos. Researchers (Spain, Italy, Czech Republic, and France) investigated lizards of the genus *Mesalina* which occurs from Africa to NW India. More than half of the species in this genus are found in Arabia, two are endemic to Soqotra. Using DNA and molecular clock estimates, Simo-Riudalbas and colleagues estimate that the ancestor of the

two species colonised Soqotra after the separation of the island from Arabia, about 7 million years ago (long before humans even existed as a species). The two endemic lizards in the archipelago, *M. balfouri* (Soqotra, Samha, Darsa) and *M. kuri* (Abd al Kuri) may have speciated two million years later. In a second study on Soqotran reptiles, Karin Tamar and colleagues from Spain and Portugal investigated *Haemodracon*, the only strictly endemic gecko genus of the archipelago. Both gecko species occur in the same place (sympatric), but differ in body size and micro-habitat. The authors estimate that the ancestors of the two species existed before the split of Soqotra from the mainland, and that the two species (*H. trachyrhinus* and *H. riebeckii*) separated much later, around the Mid-Miocene (the Miocene covers the period 23-5.3 Mya). Islands often are good places to study evolution - it shows how important it is to protect such ancient lineages for science.

3. MARINE ENVIRONMENT

All studies that appeared about the marine realm of Soqotra in 2019, are about fish and bristleworms. A new species of bristleworm (Polychaeta) was described from previous expeditions by researchers from Spain and Germany in *Zootaxa*. The fish studies include very creative names such as the chocolate-dipped damselfish (*Chromis*) and the Lizardfish (*Synodidae*). The new lizardfish *Trachinocephalus atrisignis* was studied on only three specimens collected off the coast of Soqotra, described in *Journal of Ichthyology* by Russian researcher Artem Prokofiev. Another fish study, by researchers from KSA, Australia and Chile, focused on DNA analysis of chocolate-dipped damselfish from different islands, including Soqotra and Christmas island. The study, led by Song He from the King Abdullah University, showed that several of these coral-reef species may cross-breed, but not around Soqotra, where the DNA of the beautiful two-tone *Chromis* (*Chromis feldi*) seems relatively pure. The researchers speculate that the low genetic mixing may be a result of the currents around the Gulf of Aden forming a barrier. A third fish study includes a checklist of coastal fish from Soqotra by Zajonz et al. in *Zootaxa*. The latter authors (from Yemen, Russia and Germany) listed 682 recorded species, and expect up to 875 species. The study includes a Soqotri co-author, former fisherman and current marine biologist Fouad Naseeb from EPA, living in Hadiboh.

In addition to the previous papers, a brief chapter on Soqatra appeared in 2019 in the book "**Coastal World Heritage Sites**" by V. Claudino-Sales. The chapter is a very broad description of the archipelago, but it emphasizes the importance of Soqotra as a natural UNESCO World Heritage Site.

4. CHEMISTRY

As the Soqotri know, many plants on the island have medicinal uses (cf. the book by Miller and Morris, 2004). Researchers from Malaysia, Yemen and KSA tested the medicinal effects of the endemic sea-lavender, *Limonium socotranum*. The authors Al-Madhagi et al. found that leaves have a potent effect and may have potential for cancer and antimicrobial treatments. The results appeared in *Tropical Biomedicine*. Also, molecules were described from Soqotran plants. Egyptian researchers (Helal et al., **Natural Product Research**) discovered a new chemical compound found for the first time in nature, which they named dracidione. The compound was extracted from resin from the Dragon's Blood Tree, *Dracaena cinnabari*. The researchers show that dracidione can act as alpha-glucosidase inhibitor (an anti-diabetic effect). Finally, in the journal *Phytochemistry*, Al-Harrasi et al. examine the anti-inflammatory and anti-depressant effects of the compound incensole from *Boswellia* species; Soqotran species are mentioned but not discussed in detail.

5. CONSERVATION

The main studies specifically oriented at conservation in Soqotra are two papers by the Czech group Maděra et al. which appeared in **Sustainability and in Biologia**. Both papers are on the Dragon's Blood Tree. In the study in **Sustainability**, which includes a Soqotri co-author Abdullateef Saad, the authors calculate that without intervention, the iconic flagship species will go extinct between 31 to 564 years from now, not taking extreme climatic events such as cyclones into account. The total population is estimated at about 80,000 trees. Therefore, long-term strategies for conservation are necessary, which will entirely depend on generations of local people and sustainable land management. Growth dynamics of the trees point towards a similar approach: Dragon's Blood Trees grow very slowly, and conservation strategies should aim for decades and centuries rather than years. Conservation is not for short term benefit, it is something for long term survival.

6. HISTORY/ARCHEOLOGY

Not many articles on history/archeology appeared about Soqotra in 2019. The most notable is an impressive work by German researcher Ingo Strauch on the former presence of Buddhist visitors on Soqotra, based on discoveries of cave inscriptions in Hoq. The book chapter is available online, entitled "**Buddhist Indian Sailors on Socotra**" in the book "**Buddhism and the Dynamics of Transculturality**", edited by B. Kellner. The following is from Keller's introduction. In the chapter, the author looks at evidence for early Buddhist presence along trade routes in the western Indian Ocean, with emphasis on the inscriptions from Hoq (4th-5th centuries CE). The amazing inscriptions, names, dedications and drawings of stūpas (a Buddhist commemorative monument) show a complexity of affiliations and social status of those who left the writings on the cave walls. There may even have been some local forms of Buddhism among the Indian communities of western traders that may have settled for a while. The writings from Hoq, discovered during the Belgian SKP-expeditions, are therefore very important for the complex history of Soqotra. Another brief historical paper appeared in Al-Masāq, **Journal of the Medieval Mediterranean** by R. Darley, covering Late Antique to the Medieval period similarities between Soqotra and Sri Lanka.

7. OTHER

One study appeared on tropical cyclones in the Arabian Sea, including a reference to Chapala that struck Soqotra in 2015 (Terry and Gienko, **Theoretical and Applied Climatology**). The paper illustrates the unusual nature of cyclone paths in the Arabian Sea.

In 2020, two special issues were published that resulted from conferences held in 2019, relating in Soqotra in various degrees. Proceedings of the first Dragon Tree Conference held in 2019 in Brno, Czech Republic, is published in the journal **Forests**, containing several papers about the Soqotra Dragon's Blood Tree. A special issue or topical collection in the Italian journal **Rendiconti Lincei** will appear in Summer 2020, as a direct result of the 2019 FoS meeting in Palermo, Italy. Both special issues contain many contributions that were prepared by FoS members, who continue to emphasize the importance of producing and disseminating high quality scientific research about the unique biodiversity and culture of Soqotra as a basis for conservation and awareness.



Vachellia pennivenia (Leguminosae: Mimosoideae) in Balfour (1888), studied by Anderson & Knees (2019)



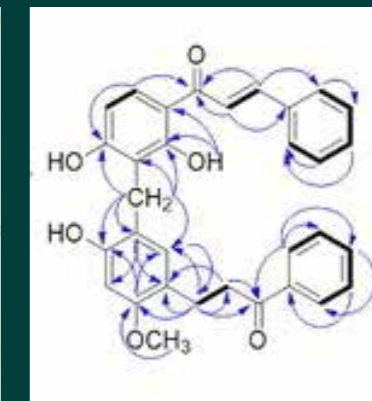
Newly described *Blepharidina socotrana* (Coleoptera: Chrysomelidae) after Biondi et al. (2019)



Stenasellus taitii, a blind isopod endemic to Soqotra and described by Messana et al. (2019)



Honey is important in Soqotra. Researchers now found it is produced mainly by African, not Arabian honey bees. Photo by KVD



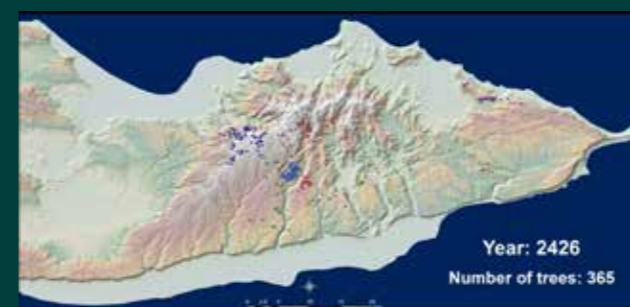
Dracidione molecule extracted from dragon's blood, after Helal et al. (2019)



Hoq contains ancient inscriptions. Strauch (2019) translated Buddhist texts from the cave, published in a recent study



Discovery of *Stenasellus taitii* in Erher Cave in 2003, by Dr Stefano Taiti (left) and Dr Kay Van Damme (right). Photo SKP



Researchers used models to predict population size in *Dracaena cinnabari* over time and suggest extinction over the next centuries (after Maděra et al., 2019)

CONSERVATION OF THE ENDANGERED ENDEMIC

BOSWELLIA TREES ON SOCOTRA ISLAND

Mendel University in Brno

By the Frankinia Project Team (Socotra Boswellia Project)

Boswellia is a genus of trees or shrubs with aromatic wood and bark known for its fragrant resin. The *Boswellia* trees have sacred and ritual as well as medical uses. The use of the frankincense of these trees is well known around the world in different cultures. Medicinally, over 2,000 years, different civilizations used *Boswellia* for healing purposes. For example, in Socotra, the bark of some trees is used as a diaphoretic, to treat rheumatism, intestinal problems, nervous disorders and skin diseases. Socotra island has the largest number of unique *Boswellia* species anywhere in the world.

GOAL

The project goal is to achieve adequate conservation for the eight endemic *Boswellia* species occurring on Socotra Island and to protect their ecosystems. The *Boswellia* trees on Socotra Island are under threat, therefore there is a joint call from the different project partners and the local communities to take the necessary conservation measures.

ACTIVITIES

1. Study and re-evaluate the distribution and abundance of all *Boswellia* species populations in Socotra and understand the main threats to their survival.
2. Develop and implement conservation measures for the *Boswellia* taxa, including the establishment of at least five nurseries and seed germination tests to produce seedlings to ensure replantation in the wild and in at least 50 home-gardens.
3. Application of conservation plans through the local communities and agencies, along with capacity building, knowledge production, awareness and education. Produce at least two scientific papers, several community meetings and four conference presentations as part of the knowledge products of the project.

WHO ARE WE?

Environment Protection Authority, Yemen (Socotra) is Yemen's official agency to preserve and conserve the environment, biodiversity and the natural resources, its integrity and monitor ecosystems from degradation or pollution in accordance to the environmental laws.

Fondation Frankinia is a private foundation established in 2005 under Swiss law. It provides grants to support nature conservation projects. Its objective is to preserve threatened tree species throughout the world and improve their conservation status.

Mendel University in Brno; a public institution with a long tradition of excellence in teaching and research, that has driven new ways of thinking since 1919. Main project coordinator involved mainly in tree re-plantation activities, home-gardens and inventory.

Royal Botanic Garden Edinburgh, UK. Scottish Government Non-Departmental Public Body and registered charity. the project partner involved in support through technical, regional and botanical expertise to include conservation assessment.

Sapienza University and Botanic Garden in Rome, Italy. Scientific institute, international organisation and project partner involved in inventory and germination trials.

TIMEFRAME

Period of 36 month (1st of January 2020 to 31st of December 2022)

CONTACT

Mendel University in Brno, Czech Republic, prof. Dr Ing. Petr Maděra; petrma@mendelu.cz

THE BIRDS OF SOCOTRA: AN UPDATE

By Richard Porter, BirdLife International



Socotra White-eyes – Socotra's latest endemic bird. These are engaged in mutual preening which is an important part of their courtship display. Richard Porter



Socotra Sunbird taking nectar from a Trichocalyx flower. Richard Porter

This year – 2020 - has seen some fascinating bird records for the Socotra Archipelago. Ahmed Saeed Suleiman, the 'Bird Man of Socotra' has made several important discoveries. Probably the most remarkable was finding a group of twelve White-faced Whistling Ducks *Dendrocygna viduata* in Qaria Creek. This is a species found in Africa and South America and has never been recorded as a wild bird in the Middle East. So it was really exciting, as was his discovery of nesting Red-knobbed Coots *Fulica cristata*. Not just one, but several nests and only the second breeding record for the Middle East where it is otherwise a rare vagrant. These observations, as well as those of Baillon's Crakes *Porzana pusilla*, a bird rarely seen on Socotra, will soon be chronicled in a paper by Ahmed Saeed in the next issue of Sandgrouse, the journal of the Ornithological Society of the Middle East.

Ahmed Saeed and I have just updated the Checklist of the Birds of the Socotra Archipelago with these and other sightings and it can be found on the FOS website:

www.friendsofsocotra.org/pdfs/Socotra%20bird%20update-05-2020.pdf

The archipelago bird list now stands at 225.

The world of bird taxonomy and nomenclature is constantly under revision and most ornithologists now follow the recommendations of the International Ornithological Congress (IOC). Their latest list places a number of families in a totally different order from those previously. To most people this will simply be of academic interest, but what won't be is that one of Socotra's most charming birds, the white-eye, has now been elevated to endemic status. Previously Abyssinian White-eye, it is now named Socotra White-eye *Zosterops socotranus*, bringing the total number of Socotran endemic bird species to eleven.

DR WOLFGANG SCHNEIDER OBITUARY

By Henri J. Dumont

Wolfgang was a much loved, supportive and warm-hearted member of the Friends of Soqotra, who attended many of the AGM meetings. He will be dearly missed. Below is a text by Prof. Em. Dr Henri J. Dumont (Ghent University, Belgium) for Tayf. Wolfgang, Fared and Henri have been close friends for decades and share a passion for dragonflies and the Arabian Peninsula. FoS hereby wishes to extend condolences to the loved ones and colleagues of Wolfgang, and our deepest respect for his values and work.



Dr Wolfgang Schneider (left) and Dr Henri J. Dumont (right) collecting dragonflies at Wadi Daneghan, Soqotra island, 1996. Photo by F. Krupp.

Wolfgang Schneider (1953-2019)

I have known Wolfgang Schneider since 1981, when we first met in Mainz, Germany. I last met him in May 2019, in his country house in Woldert. In these 38 years we both worked mainly on dragonflies, of arid and semi-arid areas. He invested most time in the Eastern Mediterranean and Arabia, I specially looked around in the West and the Sahara. We were thus largely complementary. We met each other regularly, for professional business and because we liked each other. Each meeting was a pleasure, but in the final decade, his health problems could no longer be disguised. Slowly but steadily, the diabetes was breaking his body down. But before that became a problem, we managed to spend time together in Saudi Arabia, shortly after the Gulf War. And in the wake

of a meeting on Socotra in the university of Aden in 1996, we managed to fly to Socotra with a small party of delegates and travelled around for a few days. Wolfgang was interested in finding *Enallagma granti* (now *Azuragrion granti*), the endemic dragonfly of the island, and he was in fact the first of our party to find it. We had a wonderful time on the island, then still without a meter of asphalt, and several papers resulted from our stay.

After his retirement, his condition went up and down, but off late, the messages from Woldert became more optimistic. We started believing that he would win the battle, but in September came the tragic news that Wolfgang had left us, long before his time. He will forever be remembered as a delightful person and an outstanding scientist.



Dr Wolfgang Schneider and Dr Fared Krupp (middle row) at the FoS AGM in Bern in 2011. Photo by Dirk Van Dorpe (FoS)

A SELECTION OF CONTRIBUTIONS BY DR WOLFGANG SCHNEIDER ABOUT SOQOTRA:

- **Schneider W (1999) Soqotra** - The Island of Dragons' Blood. *Agrion* 3(2):27-28
- **Schneider W, Dumont HJ (1998)** Checklist of the dragonflies and damselflies of Soqotra Island (Insecta: Odonata). In: Dumont HJ (Ed.): Proceedings of the First international symposium on Soqotra Island: Present and future. Volume 1. United Nations Publications, New York, USA, pp. 219-231
- **Schneider W, Nasher AK (2013)** Dragonflies from mainland Yemen and the Socotra Archipelago – additional records and novelties. *International Dragonfly Fund – Report* 57:1-13
- **Schneider W, Samraoui B, Boudot J-P (2018)** *Azuragrion granti*. The IUCN Red List of Threatened Species 2018: e.T60286A75346501. (URL: <https://dx.doi.org/10.2305/IUCN.UK.2018-1.RLTST60286A75346501.en>)



TOP - Soqotri Salem Hamdiah speaking at the event in Porto, Nov 2019, © CiBIO-InBIO

LEFT - Connect2Socotra event at the Orto Botanico di Roma, Oct. 2019, © Marco Livadiotti

RIGHT - The Connect2Socotra banner by UNESCO, ©V. Melnik

THE CONNECT2SOCOTRA CAMPAIGN

By Anna Paolini, Georges Khawam¹, Bruno Bertelli², Kay Van Damme³

The Connect2Socotra campaign was launched at the Botanic Garden of Palermo (Italy) at the 18th FoS AGM, 26-29th September 2019 by Anna Paolini and Kay Van Damme.

Connect2Socotra is an initiative by UNESCO and Friends of Soqotra (FoS), together with leading museums, botanical gardens, academic institutes and other organizations around the world which host collections and specimens from Soqotra.

The idea grew from a UNESCO awareness campaign in 2016, called **Unite4Heritage**. Museums United for Yemen, focusing on highlighting the rich Yemeni culture. The Connect2Socotra Campaign is unique to Soqotra.

The aim of the campaign is to raise international awareness and engagement focusing on the richness of the unique biodiversity of the Soqotra archipelago and the importance of science and conservation.

The beauty and uniqueness of Soqotra's biodiversity and its culture are highlighted during the Campaign, and equally the main global challenges that Soqotra faces, as do other culturally and naturally rich areas around the globe. These include climate change effects, overgrazing, land degradation, unsustainable development and resource use, the potential effects of exotic species and the loss of the local language and culture. The goal is to

connect the world to Soqotra, and connect Soqotra to the world, through these issues that are important for us all. We shall in fact be reminded that Soqotra was designated as a **World Heritage site** in 2008 for its biodiversity of outstanding value and for the integrity of its natural habitats. Soqotra is also a **UNESCO Man and Biosphere site** since 2003.

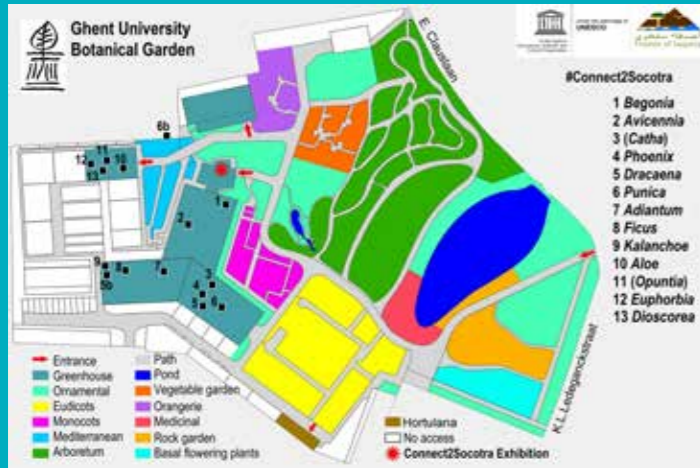
The campaign was a great success. In total, 14 international institutes joined the campaign, including the Liverpool

National Museums (UK), CiBIO-InBIO and the University of Porto (Portugal), the Botanical Garden of Rome (Italy), the Ghent University Botanical Garden (Belgium), the Botanical Garden and Mediterranean Herbarium of the University of Palermo (Italy), the Royal Botanic Garden Edinburgh (UK), Botanical Garden and Arboretum Mendel University (Czech Republic). The activities often included people from Soqotra and mainland Yemen,

with an interest and involvement in biodiversity conservation. More than 50 newspapers, radio, local TV stations and online journals have featured the Campaign. More than 15 events took place including permanent exhibitions, lectures, film screenings, photo exhibitions, etc. Overall, more than 40,000 people attended the events in person, and we estimate a much larger number of people that engaged through social media using the hashtag **#connect2socotra**.

In September 2019, the campaign started at the **Botanic Garden of Palermo**, including unique exhibits composed of herbarium specimens from Soqotra and information panels about the endemic plants. In addition, as part of the Soqotra in Sicilia event, beautiful photographs about Soqotra by Vladimir Melnik, Jordi Esteva and Martin Rezek were on show. This event was followed in October 2019, by one at the **Botanical Garden of Rome** showcasing photographs of Soqotran landscapes and endemic plants. Beside this, the events in Rome under the Connect2Socotra campaign included the screening of Jordi Esteva's beautiful film 'Socotra, the island of djinns', tours in the garden and a series of scientific presentations widely attended by the general public and the Embassy

¹UNESCO GCC and Yemen Office, Doha, Qatar | ²Politecnico di Torino, Italy | ³Ghent University, Belgium



TOP LEFT - *Connect2Socotra* campaign in Ghent (Belgium) © KVD

SECOND LEFT - *Herbarium specimens on display in the Botanic Garden of Palermo, Sept. 2019* © KVD

THIRD LEFT - *Herbarium specimens on display in the Botanic Garden of Palermo, Sept. 2019* © KVD

BOTTOM LEFT - *Map of the institutes participating in the Campaign* © UNESCO

TOP RIGHT - *Photos on display in Ghent (Belgium) Nov. 2019* © KVD

SECOND RIGHT - *Images and specimens from the Henry O. Forbes' expedition were on display at the World Museum in Liverpool (UK) for the Campaign. Image - the Socotra Scops Owl, after Forbes (1903)*

of the Republic of Yemen to Italy. In November 2019, the **University of Porto's** biodiversity research centre CIBIO-InBIO also screened the film by Jordi Esteva to raise awareness on the rich and distinct natural and cultural heritage of Socotra and to promote scientific research in the archipelago. Another event was held at the **Hall of Biodiversity**, part of the **Natural History and Science Museum of the University of Porto**. These events in Portugal also included a presentation by Salem Hamdiah from Soqatra. The Royal Botanic Garden of Edinburgh (UK) provided social media soundbites highlighting the natural and cultural diversity of Soqatra and its conservation. The Garden hosted a public event for Climate Week 2019, showing unique live plants from Soqatra in their collection and threats these species face in arid countries due to climate change, including talks by Dr A. Miller.

World Museum Liverpool (UK) ran a display on the biodiversity of Soqatra from October 2019 to January 2020, showcasing historical collections of James Raymond Wellsted (1834), Henry O. Forbes (1898-99) and members of the Liverpool Museums expedition in the late 19th century to Soqatra. The display highlighted the role of the institution in establishing the baseline for understanding the biodiversity of the plants and animals of Soqatra and the importance of historical collections. Some of the oldest museum specimens of Soqatran birds, such as the endemic buzzard, were on display.

From November 2019 to February 2020 **Ghent University Botanical Garden in Belgium** organized a photographic exhibition and displays on Soqatra's fascinating flora and current threats to the archipelago's fragile island ecosystems, focusing on climate change impacts, exotic species, unsustainable resource use and

overgrazing. The exhibition was visited by thousands of people, including the Ambassador of Yemen to Belgium, and included activities for schoolchildren and panels in the garden with information on species related to Soqatran plants. The closing event in Ghent University included a seminar, discussion panel and exhibition tour for students, discussing challenges to Yemen biodiversity and water resources, attended by a representative of the Ministry of Water and Environment of Yemen and a UNESCO representative from Brussels.

Mendel University Arboretum and the Department of Forest Botany, Dendrology and Geobiocoenology in Brno in Czech Republic, dedicated a number of scientific articles to the same themes. In addition, the Czech National Radio programme dedicated a series of broadcasts (on research activities in Soqatra) to the Campaign. **The National Museum of Prague** and Italian research institutes contributed by dedicating scientific papers on biodiversity to Connect2Socotra.

Planned for 2019 the Campaign extended into part of 2020. The Connect2Socotra Campaign was featured during the EU-UNESCO event "Culture, Heritage and Youth Nexus" in Brussels at BOZAR, March 3d, 2020. Copies of the FoS newsletter Tayf and pamphlets on Soqatra were prepared and distributed in a "Soqatra-dedicated corner" together with a banner ensuring that the biodiversity of Soqatra (and its challenges) was highlighted among the attendants. Photos of Soqatra were also part of the EU-UNESCO event.

A large public event, including Soqatran speakers for the Campaign and highlighting the historical connections with Austria on biodiversity research, was organised by the **Natural History Museum in Vienna** for 22th May 2020,

the International Day of Biodiversity, but was cancelled due to Covid-19. A new species and checklists contributing to our knowledge on the rich Soqatra biodiversity were described in papers specifically dedicated to the Campaign, such as the articles by Hájek & Bezdek (2019) and Messana et al. (2019) in **Zootaxa**. The engagement and effects of the Campaign were also part of the dissertation topic of Bruno Bertelli, who received his Master Degree with honours.

The organisers of the Campaign wish to thank everyone who engaged with energy and enthusiasm since the very start, in spreading the awareness on the uniqueness of the biodiversity and culture of Soqatra and its fragility and need for protection.

From interviews and feedback in guestbooks, people felt interested, many learning for the first time of the unusual beauty that Yemen harbours in Soqatra. Many people in each Institute volunteered and worked very hard to realise the activities, which created a hugely positive, engaged, and warm atmosphere spreading the passion and love for Soqatra. We also wish to thank the photographers, writers and film makers who contributed their materials to the Campaign, helping people to connect to the beauty and challenges in Soqatra.

MORE INFO:
www.en.unesco.org/connect2socotra

The MSc Thesis B. Bertelli on Connect2Socotra (in Italian) can be downloaded at www.webthesis.biblio.polito.it/14414

CONTACT INFORMATION

Friends of Soqotra (FoS)

Friends of Soqotra (UK Charity Number 1097546) was formed in 2001. Its distinctive rationale is to bring together people with backgrounds in scientific research and those with a more general interest and develops the synergies between them in order to:

- Promote the sustainable use and conservation of the natural environment of the Soqotra island group.
- Raise awareness of the archipelago's biodiversity and the unique culture and language of the islanders
- Help improve the quality of the islanders communities and support their traditional land management practices



Contact FoS

CHAIRPERSON: **Dr Kay Van Damme**
kayvandamme@gmail.com

SECRETARY: **Lisa Banfield**
fos.secretary@gmail.com

VICE-CHAIRPERSON: **Dr Miranda Morris**, miranda@mirandamorris.com

WEBSITE MANAGER: **Dr Dana Pietsch**
Dana.pietsch@unituebingen.de

COMMITTEE AND ADVISORY BOARD:
Haifaa Abdulhalim, Isam-Eidin Mohamed Ali, Fabio Attorre, Lisa Banfield, Salwa Barkan, Peter De Geest, Hana Habrová, Petr Maděra, Vladimir Melnik, Hugh Morris, Miranda Morris, Eike Neubert, Dana Pietsch, Martin Rejžek, Tullia Riccardi, Kay Van Damme, Dirk Van Dorpe, Raquel Vasconcelos

Tayf

Friends of Soqotra publishes "**Tayf-the Soqotra Newsletter**" annually.

If you would like to include an article, research note or notice in future issues, please send to the Tayf editor Dr Hana Habrová at **hana.habrova@centrum.cz** or general at **tayf.fos@gmail.com**

EDITING AND TRANSLATION:
Hana Habrová and Sue Christie (ENGLISH), Haifaa Abdulhalim (ARABIC)

LAYOUT: Iveta Lekesova (ENGLISH), Haifaa Abdulhalim (ARABIC)

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FoS Website

The Friends of Soqotra website is managed by Dana Pietsch. It provides information on completed and ongoing scientific research on the Soqotra Archipelago including data, bibliographies and contacts of institutions and research teams. The structure and layout also includes a page in Arabic, which gives some general information about FoS. Also the constitution is included in Arabic as well. All financial reports and account information are public on the website.

If you would like to submit content for the website, please contact
dana.pietsch@unituebingen.de

WWW.FRIENDSOFSOQOTRA.ORG

fos.secretary@gmail.com

kayvandamme@gmail.com

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