The Zoological Garden has a new website

We are happy to announce that the new Zoological Garden's website is now up and running. On the new website you can find information on the research being carried out in the Garden, our animals, future plans, renovations, etc. You are invited to visit the website: [http://zoo.tau.ac.il](http://zoo.tau.ac.il). The new website is only in Hebrew for now, but we hope to have an English one soon.
A new turtle pond

Next to the eastern path of the garden, whose renovation is nearly complete, a new turtle pond has been built. The location of the pond was chosen in order to enhance accessibility to the turtles, which until now were not within the main exhibit areas, and to add content and interest to the path area. On the 1st of December, five Caspian turtles and two Nile soft-shelled turtles were released into the new pond, and they are slowly getting used to their new home. On the ground, where the pond wall is low, a basking platform has been built. A convenient path with moderate slope, which will help the turtles exit the water directly onto the basking platform, will also be built soon. Behind the basking platform typical bank vegetation is planned, to give the area a more natural look and enable the turtles to feel at home. In the future, an exhibition of red-eared sliders – an invasive species in Israel – is planned for one of the corners. The work on the turtle pond is not finished yet, and upon its completion the temporary fence will be replaced with a low and aesthetic one. The turtle ponds previously in the research area have been drained and a room for the trash container is now being built in their place.

A romantic story with a prickly end

Our long-eared hedgehogs, a male and a female, are housed in separate cages due to their solitary nature. About three or four months ago, the keepers noticed that the male was sneaking out during the night and getting into the female's cage. The naughty hedgehog was returned to its own cage each time, but the morning after was again discovered in the female's cage!
This behavior continued for a short while, and then suddenly stopped. A few weeks later, at the end of November, four hedgehog pups, about six weeks old, were discovered…

In mid-December the family was separated and the growing pups were moved into spacious cage in the reptile yard: the westernmost cage in the northern row of cages. According to Barak, their keeper's, suggestion, they will be fed with insects – a delicacy for them – in the morning hours, so that they will be active during the tour hours. In the photo: the four young hedgehogs starting to become familiar with their new habitat.

A new exhibit of Buxton's jirds

As part of a research carried out by Michal Zaitzove-Raz and Or Komai, supervised by Prof. Tamar Dayan, five Buxton's jirds were brought to the Zoological Garden – three females and two males. The jirds were collected on 28.11.15 in the fields of Tze'elim and Gvulot. The Buxton's jird is an endangered endemic species. The aim of the study is to evaluate the frequency of these jirds in agricultural fields in comparison to their frequency in nature reserves in the area. The study is carried out by capturing jirds and by analyzing the contents of barn owl and long-eared owl pellets for the remains of jirds. The five Buxton's jirds are now housed in a spacious cage, near the hedgehogs' cages in the reptile yard.
Updates from our wolf pack

Shosha, the female wolf who returned to us after living for several years in the Abu-Kabir Zoological Garden, unfortunately has failed to establish her place in the pack. Our old female closely guards her position as alpha female, and because usually only the alpha female breeds, it is unlikely that Shosha will reproduce within the current structure of the pack. Therefore we decided to separate forces: Shosha has been paired with our younger male and our older female with the older male. Both pairs use the big yard alternately. The relationship between Shosha and the young male are quite cool for the time being, but we hope it will warm up with time, perhaps when Shosha comes into heat.

Zoological Garden newsflash

🌿 The year has passed quickly, winter has arrived and, exactly like last year, the Hawaiian geese (nene) are pairing off again and starting to display aggressive behavior, deterring passers-by from their territory.

🔥 Due to the low temperatures in winter, some of our reptiles have been moved into a warm room, including the Boa constrictor and iguana.
Airplanes, spying and conservation

*Rumex rothschildianus* (also known as *Rumex aeroplaniformis*) is a small dioecious annual, extremely rare, and endemic to the central coastal plain of Israel. It survives in only a few populations along the Sharon coastal strip. The plant was first discovered by Aaron Aaronsohn in 1906, who named it in honor of Baron Edmond de Rothschild. Its second name comes from the resemblance of its fruits to little airplanes. The coastal dune vegetation plot is part of the Noah Naftulski garden of Israeli flora. Many of the plants in this collection have been defined as "Red-list species", endangered due to massive development and habitat degradation, including *Rumex rothschildianus*. At the beginning of December hundreds of seeds of *Rumex rothschildianus* were sown in both the Garden's nursery and in the coastal dune plot.

The TAU Botanical Garden preserves more than half of the known Israeli endangered plants. They are part of the Garden’s plant exhibitions and used to educate toward the
conservation of biodiversity. Our goal is to maintain a stable population that can be reintroduced back into nature when needed. You are invited to observe the seedlings during the winter and enjoy their unique blossom in the spring.

We've got food!

One of the highlights of the TAU Botanical Garden is the Daphna Carasso Garden of Tropical Plants. We recently established a new section in the tropical greenhouse, dedicated to utility tropical plants. This collection comprises large and small species of different life-forms, most of them used as food sources and some for medicinal purposes. Among the plants found in this collection is the papaya (*Carica papaya*) – an herbaceous tree-like plant, originating in Central America. Its large fruits are sweet, edible, and popular worldwide. Some parts of the plant are also used in medicine. Other species of utility plants found in this collection are black pepper (*Piper nigrum*), pineapple (*Ananas comosus*), and coffee (*Coffea Arabica*).

Natural color

The shrub *Lawsonia inermis* has recently started blooming in the dye plants plot, close to the Botanical Garden's office building. It has white flowers and small roundish ball-shaped capsule fruits. The plant is better known as henna, whose dried ground leaves are used for dyeing hair and skin. It contains a compound called lawson which permanently attaches to
the keratin in our skin, hair, and fingernails, and dyes it a reddish-brown shade. Henna has also been used for dyeing wool, silk, and leather. The plant has been in use since the ancient Egyptian period (about 6000 years ago) and is still important nowadays, both in traditional religious ceremonies and weddings, as well as for the modern cosmetic industry. Another plant that has been used for similar purposes is *Senna italica*. “Blond Henna” or “Natural Henna”, which gives the treated hair an extra shine and dyes it a light yellow, is extracted from its leaves. *Senna italica* distribution is in north-east Africa, and Israel is located at the edge of its distribution range - it grows in the south of Israel, in the desert wadis of the Arava valley and Eilat, and can be found in the "harsh desert" plot in our Garden.

Dyer's Alkanet (*Alkanna tinctoria*) is another species that is used for similar purposes. The Latin genus name is derived from a misspelling of the Arabic word “Al-Henna”. The plant’s roots are red and its extracted dye can be dissolved in either oil or alcohol. It has been used, and in some cases still is, in cosmetic products for coloring face and body, as a coloring agent in timber varnish, and as food coloring. The plant inhabits stabilized sandy and loamy soils of the Israeli coastal plain, and can be found in the kurkar (calcareous sandstone) habitat plot in the Garden.

**Under a rock**

In the Mediterranean scrub area in the Garden there are a few hidden plots of rockery and rocky walls. Rocky habitats, cliffs and bluffs create a unique habitat which differs from its surrounding area. Plants that grow in this habitat are able to exploit the small volume soil pockets and rock crevices, which tend to dry out quickly. Some of the plants are adapted to these habitats. In some cases they can grow in a very
shallow soil layer and are adapted to the dryer conditions, as are some stonecrop species (*Sedum* spp.). Others have a root system that is able to grow into the rock crevices while dissolving the rocks themselves, such as the golden drop (*Podonosma orientalis*) and white-leaved savory (*Micromeria fruticosa*). These plants prefer the rocky habitats as their special adaptations give them a relative advantage, enabling them to avoid competition with other plants over better quality habitats. Several typical and interesting plants have recently been planted in the rocky walls and rockery, such as *Stachys distans*, which blooms in a pinkish-white color; Crete cabbage (*Brassica cretica*), which blooms in yellow and is a close relative of the garden cabbage (*Brassica oleracea*); and rough-leaved Michauxia (*Michauxia campanuloides*), which has big white flowers with a unique structure. The latter two are “Red species”, in danger of extinction in Israel.

**Tree orthopedics (part B): Acacia xanthophloea**

Two very large trees of *Acacia xanthophloea* welcome the visitors to the Botanical Garden and their shade on the main trail is much appreciated. Three trees were planted several decades ago when the garden was established, but unfortunately one of them collapsed 12 years ago. In order to prevent events like this from happening again, the trees of the garden are monitored and treated. *Acacia xanthophloea* is a spiny tree originating in eastern Africa. It blooms in the fall (September -November) and its fruits ripen at the end of the winter. The tree is used in
construction, furniture, medicine, and as forage. In early December an orthopedic treatment, including support cables, trimming and pruning, was carried out on the two acacia trees. After shredding, the removed branches were used as mulch. The TAU Botanical Garden is part of a project dedicated to protecting trees in the urban environment, run by the Forest Commissioner - Ministry of Agriculture and Rural Development.

**Israeli crocus**

During the present season we are enjoying the blooming of several crocus species in Israel. The Hermon crocus (*Crocus hermoneus*) blooms in the autumn, usually flowering before leaf emergence. The leaves emerge only after heavy rain, around November. This year we had heavy rains as early as October, so the blooming and the leaf emergence took place together. This is a geophyte with a sub-terrestrial corm and impressively large flowers that bloom close to the ground, in shades of pinkish-white to purple. It has a fragmented distribution in Israel. One subspecies, *Crocus hermoneus subsp. palaestinus*, grows on the Hermon Mountain, while the second subspecies, *Crocus hermoneus subsp. hermoneus*, grows on the Samaria Mountains, in only a few spots in the area of Ramallah and Bet-El. It is therefore considered to be a “Red species” in Israel. During previous, more humid and colder eras it probably had a larger, continuous distribution range, and climate change is the cause of its fragmentation today.
Its global distribution range is limited to Lebanon, Israel, and Jordan. In the center of the flowers one can spot the orange stigmas (part of the "female" reproduction system of the flower). The stigmas of the saffron crocus (*Crocus sativus*), a related species, are more commonly familiar as saffron, the most expensive spice in the world. Several other crocus species are currently blooming, such as *Crocus cancellatus*, a very similar species that differs in the structure of the fibers covering the corm; Aleppo crocus, (*Crocus aleppicus*), which blooms in white with bright colored anthers (the part of the stamens that contains the pollen); and *Crocus hyemalis*, which also blooms in white with dark colored anthers. The latter is the most common species of crocus in Israel.