

Aularian Feature

A Microglimpse at Korean Plants**Radek Pelc (1992, Physiology)****on a visit to Dr Kim Chan-Soo 김찬수 in the ancient Tamna Kingdom**

The largest Korean island, Jeju is comparable in size to London. Until 1404, it was an independent Tamna Kingdom. Its geography and geomorphology makes it a biodiversity gem featuring tropical, subtropical and temperate-zone plants and animals not found anywhere else on the planet.

My mission at Jeju Island was to examine microscopic morphology of its evergreen plants. Dr Alan Whittemore (US National Arboretum, Washington, DC) who visited Jeju earlier encouraged me to pursue such plan. As plants are naturally adapted to utilize light and their epidermal cells act as microlenses plant material is actually also useful in testing microscopes' performance. This was discussed a year earlier over Korean beer & dried squid at a conference in Jeju with Tatsuro Otaki, an optical designer at Nikon's Core Technology Centre in Tokyo. Previously, he spent some time in Oxford.

Upon securing a travel fellowship from National Research Foundation (NRF) of Korea to visit Jeju Island, I fine-tuned a research plan at Stentor Institute in Prague with

Dr Zdeněk Hostounský, a plant expert. And with the blessing of Institute of Physiology, Czech Academy of Sciences where I work, and matching funds from a Microscopy Centre grant of Dr Lucie Kubínová, the Institute's director, I 'shipped' myself and a specialized microscope to the Warm-Temperate Forest Research Centre KFRI in Jeju Island.

Initially, I was sampling plants at the Centre's arboretum, and later at other sites, too, under the guidance of Dr Kim Chan-Soo 김찬수 (my host scientist) and Kim Jin 김진. Many interesting locations were fairly remote. This included the *gotjawal* 꽃자왈, a forest growing on near-bare rock, a manifestation of the island's volcanic nature and a young age of mere one million years.

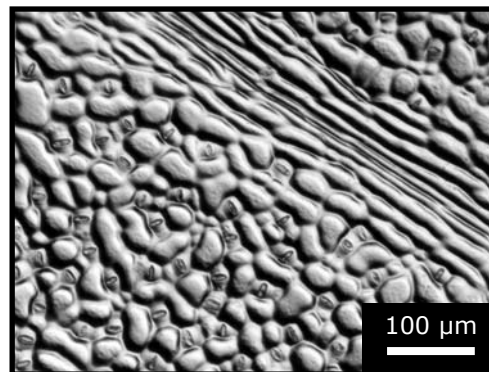
I quickly realised that much less equipment actually needed to be sent over as local laboratories were well equipped. I was either given a lift by Dr Song Gwan-Pil 송관필 to Jeju Biodiversity Research & Hi-Tech Development Institute (HiDI) to use their microscopes, or cycled there through a beautiful countryside. The data (now being processed) seem

publishable, which is my next mission.

However, it wasn't "science only" at Jeju. I enjoyed Korean alphabet *hangeul* 한글, the most logically designed script on Earth, climbed *Seongsan Ilchulbong* 성산일출봉, a volcano that emerged from the sea only 4,000 years ago, and ate sushi on a daily basis.

At the Forest Research Centre, I occupied a beautiful guesthouse with the view of a blossoming *Camellia* sprinkled with snow. MSc students visiting from Seoul National University, Korea's premier learning institution were very kind; Jo Hyeon-Gi 조현기 initiated me into classic Korean cinematography while Jung Jong-Bin 정종빈 and Park Jae-Sung 박재성 trained me to eat crab complete with exoskeleton.

It is certainly no accident that the World Conservation Congress 2012 is taking place here, at the International Convention Center often hosting heads of states. If you happen to be in the Far East, missing the chance to visit Jeju Island and its three UNESCO Natural Heritage sites certainly cannot be recommended.



↑ Data obtained at Jeju Biodiversity Research Institute HiDI. The micrograph is a schlieren contrast image of a replica in transparent resin of the lower leaf epidermal surface of redneck rhododendron ↗ (*Daphniphyllum macropodum*).

← A not-so-warm an excursion with Dr Park Chan-Ryul 박찬열 to an experimental site of Warm-Temperate Forest Research Centre, 8 January 2010. Centre's intern (Kim Hyo-Jeon 김효정, left) and a BSc student (Oh Su-Eun 오수은) of Kongju National University are posing in front of *Cryptomeria japonica* trees and evergreen sub-canopy. Former Jeju flag is shown in the corner.

Radek PELC & Chan-Soo KIM (2011)

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