Bocconea 27(1): 5-11
doi: 10.7320/Bocc27.1.005
Version of Record published online on 17 December 2015

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The 12th "Iter Mediterraneum" in Tunisia, 24 March – 4 April 2014

Résumé

Domina, G., Greuter, W., Elyes Kchouk, M., El Mokni, R., Smaoui, A., Vitek, E., Bazan, G., Escobar, P. & Raimondo, F. M.: The 12th "Iter Mediterraneum" in Tunisia, 24 March – 4 April 2014. — Bocconea 27(1): 5-11. 2015. — ISSN: 1120-4060 printed, 2280-3882 online.

The organization and logistics of the 12th OPTIMA Iter in Tunisia from 24 March to 4 April 2014 by OPTIMA and ATUTAX is here reported. The material used and the workflow are illustrated as reference for the organization of future similar collaborative botanical excursions.

Mots-clés: Itinera mediterranea, OPTIMA, ATUTAX, logistics, scientific mission.

This is an account of the organization and logistics of the 12th OPTIMA Iter in Tunisia from 24 March to 4 April 2014, to serve as baseline for the organization of future similar collaborative botanical excursions.

The general organization followed the indications by Valdés (1991). The main aims of the Itinera Mediterranea are to improve the floristic knowledge of visited countries and to train in the field junior botanists through the expertise of accompanying senior ones. This current Iter was organized one year in advance by ATUTAX (Association Tunisienne de Taxonomie) and OPTIMA. The route was selected by ATUTAX and approved by the OPTIMA Secretariat, taking into account the Important Plant Areas of Tunisia defined by Kchouk & Smaoui (2013). The Iter was divided into three portions, each devoted to the study of a particular area (Fig. 1): Cap Bon (24 to 28 March), Mogods (29 March to 1st April) and Kroumirie (2 to 4 April); and each based at a different hotel. Starting from these logistic bases, a total of 43 collecting sites were visited, belonging to six of the country's phytogeographical regions defined by Cuénod (1954): Cap Bon, Dorsale Tunisienne, Tunisie du Nord-Est, Vallée de la Medjerdah, Mogods, and Kroumirie (see Greuter & Domina 2015: Table 1). Collecting sites were so chosen as to be attainable by bus in 1.5 hours at most, starting from the hotel. For transport, a bus with 22 seats was available. For transfer of equipment and luggage from one hotel to the next, a lorry with 11.5 m^3 charge volume was available. At least one 4×4 vehicle would have been desirable, to shuttle participants from the bus to areas not accessible by paved roads, but costs for this facility were prohibitive, so that participants had to reach such areas by foot.

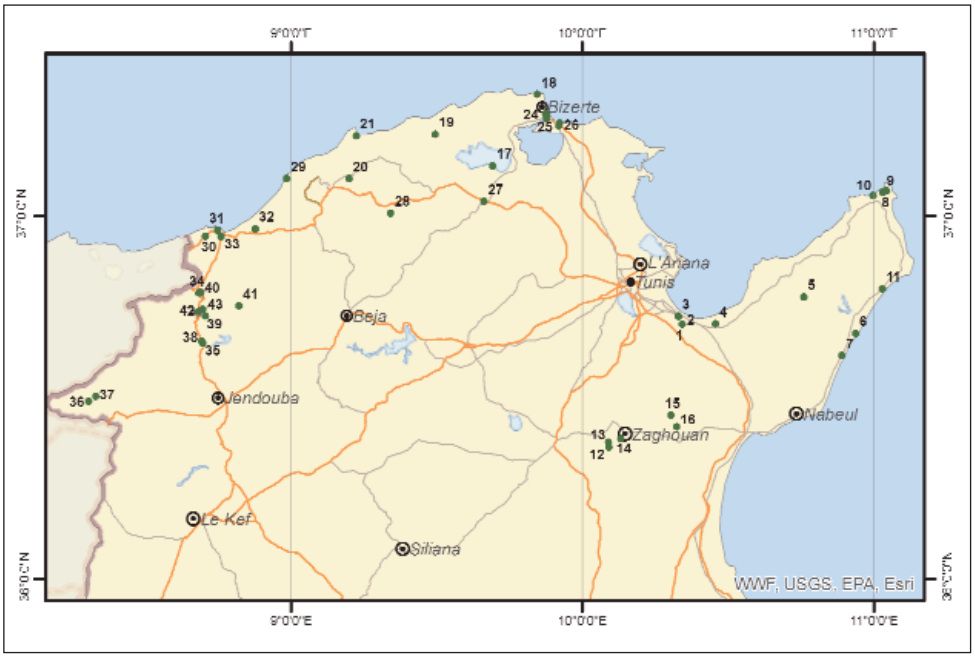

Fig. 1. Map of the sites visited during the XII OPTIMA Iter in Tunisia.

On the first day, an introductory seminar illustrating the geological, climatic, environmental and floristic peculiarities of the visited areas was held: It is here summarised by Smaoui (2015).

Each hotel offered suitably dimensioned facilities for the preparation and drying of the collected material: a large room equipped with tables and electric power, permitting "dirty" work, the storage of newspapers, presses and other supplies as well as the installation of the drying equipment.

Following a public call, applicants were selected for participation on the basis of their submitted curricula. OPTIMA selected 4 junior and 6 senior foreign participants; ATUTAX selected the 14 Tunisian participants: 2 to accompany the whole Iter and 12 who, by groups of 4, were to take turns over the three successive portions. There were thus 24 participants in total, 14 Tunisian and 10 from abroad. At any one time, the group (Fig. 2 and 3) comprised 16 persons.

Tunisian participants

Ridha El Mokni (24 March to 4 April)
Abderrazak Smaoui (24 March to 4 April)
Inès Ellouze (24 to 28 March)
Henda Merchaoui (24 to 28 March)
Nesrine Mrabet Rokbeni (24 to 28 March)
Ameni ben Zineb (24 to 28 March)
Fathia Abdallah Bouhdima (29 March to 1st April)

Fig. 2. Group photograph at Jebel Ressas, 28 March 2014.

Fig. 3. Group photograph near Tabarka, 2 April 2014.

Imtinène ben Hadj Jilani (29 March to 1st April)
Awatef Rhimi (29 March to 1st April)
Chahed Thouraya (29 March to 1st April)
Lotfi Abdallah (2 to 4 April)
Mohamed Dammak (2 to 4 April)
Imen Lahmayer (2 to 4 April)
Wala Toumi (2 to 4 April)

Foreign participants
(24 March to 4 April, unless otherwise stated; *s,* senior participant; *j,* junior participant)
Nicola Ardenghi, Pavia, *j.*
Giuseppe Bazan, Palermo, *s.*
Gianniantonio Domina, Palermo, *s.*
Pedro Escobar, Vienna, *s.*
Werner Greuter, Palermo (24 March to 2nd April), *s.*
Anna Guttová, Bratislava, *j.*
Francisco Javier Jiménez López, Sevilla, *j.*
Francesco Maria Raimondo, Palermo (29 March to 4 April), *s.*
Marek Slovak, Bratislava, *j.*
Ernst Vitek, Wien, *s.*

In the field, participants formed collecting teams of 2(-3), each team concentrating on, but not limited to, specific groups of families assigned to its care. For vascular plants, 10 sets of each gathering were collected when feasible. Lichens were the exclusive domain of Anna Guttová (see Guttová 2014 and Guttová & al. 2015). Bryophytes were taken care of by Gianniantonio Domina and Francesco M. Raimondo (see Campisi & al. 2015).

In the late afternoon, back at the hotel, the collected specimens were pressed pressed between newspaper and, in the process, numbered and provisionally identified. All specimen and locality data, including such additional data as flower colour or estimated size, were entered on the spot into an MS-Excel table, all this information is to be used subsequently for the purpose of labelling. The definitive, univocal gathering numbers, sequentially assigned, were noted in a standard location on the newspaper wrappers. Between the numbered, permanent wrappers enfolding the plants, newspaper pads were inserted to serve as blotting paper.

On the following day, the first-day newspaper pads were replaced by corrugated cardboard (one per 1-3 plant wrappers) and the drying process was accelerated by the use of electric heating, following a technique learnt in 2003 during the excursion “Epifenómeno” organized by Santiago Castroviejo and the Working Group of Flora Iberica in Sardinia.

The presses, with multilayer wood boards of 30 × 40 cm, were ca. 80 cm high, containing ca. 80 crardboard sheets. Each was connected to an electric ventilated heater by a sheath of fireproof tarpaulin (100 × 250 cm), tightly fixed on either side by means of elastic rope, the cardboard corrugations lying in the direction of the hot air flow (Fig. 4 and 5). The heaters were set to medium power (1000 W), to avoid overheating that might have prejudiced future DNA extraction. With temperature of ca. 45°C within the presses, most of the plants were dry within a single day.

Fig. 4 and 5. The presses for drying specimens.

In total, 22 presses and 4 electric heating devices were available for simultaneous use during the Iter, and 2000 Kg (about 5 m^3) of newspaper were purchased. Due to prevailing bad weather, drying damp paper out of doors was possible only for two days.

As agreed in advance, local authorities were notified daily of the group's planned movements so as to grant free access to protected or otherwise restricted areas and ensure local support. Lunches were organized in the field; dinners were taken at the hotels. As Escobar (2014) reports, we enjoyed a jolly and companionable atmosphere that made the Iter a pleasant, instructive, memorable and event.

At the end of the excursion, most specimens were dry but some were still in the presses, for which our Tunisian hosts undertook to complete the drying. This was important because the transfer of the harvest to Palermo took much longer than expected: due to logistic problems and customs formalities, the collected material remained in Tunisia for another month, eventually to be shipped to the Botanical Garden and Herbarium Mediterraneum in Palermo in two pallets by private transport. Here the material was sterilized by freezing, the critically identified, mostly by W. Greuter (see Greuter & Domina 2015). Formatting and printing the labels was done on the tabular data prepared by care of E. Vitek.

The principal sets of herbarium specimens, sorted, packed and dispatched by care of the Herbarium Mediterraneum, were distributed in conformity with a previous agreement among the participants. They are as follows:

1. Palermo (OPTIMA Herbarium, PAL-Gr):.....1386 Nos.
2. Tunisi (Centre de Biotechnologie de Borj Cedria): .....1278 Nos.
3. Vienna (W): .....1169 Nos.
4. Seville (SEV).....1053 Nos.
5. Bratislava (SAV).....939 Nos.
6. Pavia (PAV) .....851 Nos.

The images of the set in Palermo can be viewed in the Herbarium Mediterraneum Virtual Herbarium (http://147.163.105.223/herbarium_vsimple_en.asp#). Depending on progress with mounting, the set in Vienna will be made available in Virtual Herbaria (http://herbarium.univie.ac.at/database/search.php) within the next year.

Acknowledgements

We thank Carlos Aedo Pérez (Madrid) for providing details on the electric drying equipment and Filippo Scafidi (Palermo) for assisting with the sorting of the plant material.

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