

skozi dobo spoznavanja novih rastlinskih vrst, njihovega gojenja v naših klimatih pa vse do tega stoletja, ko častitljivi vrt služi didaktičnim namenom, in do najnovjšega časa, ko služi raziskavam o ohranitvi redkih in ogroženih vrst v naravi. Takšno gojenje vrst, ki so v naravi skrajno redke in pred izumrtjem, imenujemo gojenje "*in situ*"; služi pa kasnejši reintrodukciji (ponovnemu nasajanju in sajenju) v naravi.

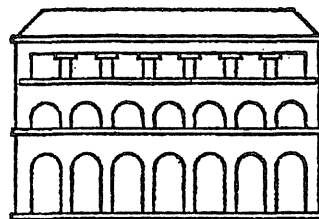
Ker je botanični vrt ukleščen v zgodovinsko mestno jedro, se seveda ni mogel kasneje poljubno širiti. Tako je pravzaprav danes eden najbolj znanih botaničnih vrtov na svetu prav gotovo najmanjši med njimi. Rastline so urejene delno še vedno po uporabni vrednosti (zdravilne, dišavnice, začimbnice), delno pa po rastlinskem sistemu. Gredice so majhne, miniaturne je rozarij, miniaturni so bazenčki za vodne rastline, grmovnice pa je potrebno obrezovati na minimalno velikost, saj je prostor dragocen. Najdemo tudi oddelek za mesojede rastline, rastlinjak za tropske rastline, kot so orhideje, ananasovke ipd., majhen praprotnik itd. Njegova posebnost so stara drevesa, pod katerimi so posedali tudi veliki možje zgodovine. Botanik in pesnik J. W. Goethe je v senci palme, ki jo še danes imenujejo Goethejeva palma (in je v dobri kondiciji), pisal svoje *Metamorfoze*.

Botanični vrt v Padovi je v štiristopetdesetih letih obstoja preživel težke čase. Od kraje zdravilnih rastlin v nasadih na samem začetku do podiranja častitljivih eksotičnih dreves za kurjavo, kadar sta bila mraz in stiska za časa vojn največja, ter do današnjega dne, ko morajo vrtnarji zjutraj najprej pobirati injekcijske igle in druge odpadke odvisnikov, ki se zatekajo v nočno samotno botaničnega vrta. Hortus Botanicus Patavinus bo pač v takem stilu stopil v novo tisočletje, vselej aktualen, sredi življenjskega utripa študentov in meščanov, podrejen njihovi miselnosti in novim vetrovom, ki jih je prinašal čas. Toda čeprav se je pred leti posušila zadnja rastlina, ki je ostala od prvotne zasaditve iz petnajstega stoletja - bila je konopljika (*Vitex agnus-castus*), ki v naravi sicer nikoli ne doseže takšne starosti - botanični vrt ni izgubil svojega renesančnega duha in svoje patine.

Jakov Dulčić

CROATIAN MARINE FISHERIES ON THE THRESHOLD OF THE 21st CENTURY

This year we are celebrating two jubilees, the 1000th anniversary of fisheries in Croatia and the 65th anniversary of the foundation of the Institute of Oceanography and Fisheries in Split. In honour of these occasions, the Symposium entitled: "Croatian Marine Fisheries on the



threshold of the 21st Century" was organized in Split, Croatia, from 16th to 18th October 1995. The topics of the Symposium were:

- Long-term changes of physical, chemical and biological properties of the Adriatic Sea
- Fisheries development and management:
 - * Pelagic resources
 - * Demersal resources
 - * Coastal resources
- Management and Fisheries Law
- Mariculture and the Environment
- Fishery economy
- International cooperation.

These topics provided the scientists from Croatia and foreign countries an opportunity to discuss the problems of national fisheries in the light of the problems common to the Mediterranean fisheries.

The Institute of Oceanography and Fisheries in Split was founded on the initiative of the Croatian Academy of Science in 1930 as the Biological Oceanographic Institute. The first director was the Norwegian scientist Hjalmar Broch. In the pre-second world war period, the Institute's activities covered mainly the studies of productivity of the coastal sea surrounding Split. Fishery-biology studies of the pelagic and benthic fish also began at that time. These studies provided basic information on the principal links in the marine food chains. The approach to the research had an ecological character, considering the Adriatic as a complex ecosystem in which biotic and abiotic elements make an entity. In the post-second world war period the field of research was broadened, and new disciplines, such as sea water dynamics, geology, ichthyoplankton, bacterioplankton, phytobenthos and biochemistry were included. Fishery investigations included also fishing techniques, statistics and fishery economy. The scope of these studies was to establish the productive potential of the Adriatic Sea at different trophic levels. For the past 15 years, scientific activities of the Institute have been intensified, particularly as far as physical oceanography is concerned. At the same time, different aspects of Man's impact on the sea and its life have been included in the research.

The research work is now carried out by five laboratories covering the areas of marine physics, marine chemistry, marine biology, ichthyology and fisheries, and mariculture. The marine physics laboratory carries out the research on various aspects of the sea water dynamics: currents, waves, and water-mass movements.

Other physical properties of the sea, such as thermodynamics, optics and sea bed properties are also studied. The activity of the marine chemistry laboratory is centred around the research on basic hydrographic properties of seawater: temperature, salinity, density, oxygen content, nutrient salts and heavy metals. The marine biological laboratory carries out the research dealing with the structure and dynamics of planktonic and benthic communities. This research includes phytoplankton and primary production, zooplankton, bacterioplankton and phyto- and zoobenthos. The ichthyology laboratory conducts research dealing with the structure and dynamics of pelagic and benthic fish species, in addition to ichthyoplankton. Different aspects of fisheries improvement, e.g. fishing technology, are also investigated. The mariculture laboratory studies the possibilities of optimal

artificial fish rearing, particularly those dealing with different development stages. The Biological Laboratory at Dubrovnik, a scientific unit of the Institute, was founded in 1950. The research activities of the Dubrovnik laboratory cover primarily planktonic biocenoses as affected by hydrographic and chemical parameters. This laboratory is also engaged in artificial rearing of different life stages of fish and shellfish. In addition, a part of the activities includes the studies of flora and vegetation of the mainland.

The present staff of the Institute consists of 82 members: 42 scientists, of which 18 PhD's, 21 MSc's and 7 undergraduates with BSc degrees are represented. Over the 65-year old history of the Institute, the scientists have published about 1,600 papers in both domestic and foreign journals.