

Sandro Pignatti – Curriculum vitae



Alessandro Pignatti (always known to family, friends and colleagues, and in his bibliography, as Sandro) was born in Venice in 1930, the youngest of three sons and, from the start, enchanted by the surprise discoveries among the artistic treasures of that city and familiar from his youthful family holidays with the mountain landscape and plants of northern Italy. The accident of his birth-date and the outbreak of World War II meant an early progress through school and it was at the age of just 17 that he entered Pavia University. Though intending to study geography there, hearing a lecture by Valerio Giacomini, a bryologist with a strong and inspiring gaze, persuaded him to change direction and, after graduating with a doctoral degree in Natural Sciences, he shifted his energy into botany. His early strand of interest in floristics, the taxonomy of plant species and their ecology, has remained with him throughout his long and productive working life.

While Giacomini had been a prisoner of war in Germany, he had been helped by Reinhold Tüxen and, in Pavia, he encouraged Sandro to develop a second phytosociological strand to his interests with both Tüxen and Josias Braun-Blanquet. These two great pioneers provided, as for so many European vegetation scientists, a unique and complementary inspiration. Visiting SIGMA at Montpellier in the spring of 1953 also proved a key experience of a different kind, because it was there that Sandro met some-

one described to him then as 'an energetic Austrian research student', Erika Wikus, who became his wife in 1956, a lifelong companion and fellow-scientist. By this time, Sandro had been appointed Assistant Professor of Botany at Pavia (1955–58), and he moved thereafter to Padua (1958–62) and then to Trieste (1962–82).

Soon after he became a full Professor at Trieste in 1962, Sandro invited there a man who was to provide a third, but crucial, inspiration for his own attitude to science. Erich Nelson was a German of Jewish origin who had worked as a botanist and artist for many years on the flora of Italy and other Mediterranean countries and emigrated to Switzerland in the late 1930s, developing his insights into the evolution of orchid flowers. Keynote qualities of Nelson's approach, which Sandro Pignatti has made his own, are a humble and intimate appreciation of the beauties of the natural world and a holistic and synthetic approach to scientific investigation rather than a reductionist stance.

In his early floristic interests, Sandro had focused mainly on coastal plants, in particular the critical genus *Limonium* in the Plumbaginaceae, for which he was later to be the specialist contributor in *Flora Europaea*. In that work, the evolutionary patterns of this genus are interpreted and many taxa validated. Sandro's magisterial knowledge of the whole Italian flora is amply displayed in the *Flora d'Italia* (1982, second edition forthcoming), a three-volume work which describes 6000 species, providing accounts and a complete coding system for about 60% of the vascular plants of Europe.

In 1983, after the death of Giacomini, Sandro Pignatti was called to Rome as Professor of Plant Ecology and, in one of those thunderclap experiences, was soon to discover a whole new flora in the glories of the Australian spring, first in an invitation from Hans-Jörg Eichler, then director of the Adelaide Botanic Garden, whom he met during an international excursion in Japan. Sandro, with Erika, has now made a total of ten visits to Australia in what has become a passion to understand the plants and ecosystems of what seems to them to be the most pristine continent left on earth.

The *Flora d'Italia* was conceived by Sandro from the start as a research tool for understanding the biodiversity of ecosystems and, at La Sapienza University in Rome, he concentrated his research activity on biodiversity, developing in particular a comparison between Mediterranean-type ecosystems in Europe and Australia and extending this to California, Chile, South Africa and the Canary Islands. In this continuing work, comparisons are being made on the basis of floristic components, plant community structure and function and the evolutionary trends of the Mediterranean flora are being investigated, the high biodiversity of this kind of ecosystem being explained by a new theory on the co-evolution of plants and man.

During all this time, Sandro has continued to develop his phytosociological insights into vegetation. From his earlier work on the seagrass communities of the Lagoon of Venice, through studies of the Stelvio mountain range in the Rhaetic Alps and the thorny cushion vegetation of Mediterranean mountains, he has used detailed field sampling, cartography and computer analysis. In collaboration with Eddy van der Maarel and Lazlo Or-

loci, he published *Data Processing in Phytosociology* (1980) and continues to develop an extensive databank for the Italian flora and vegetation. For the new project SynBioSys Europe, in which Sandro Pignatti is a key team member, the celebrated tabellarium which he has developed in the Orto Botanico in Rome is a vital resource.

Working at a landscape scale, Sandro has published a general treatise, *Ecologia del Paesaggio (Landscape Ecology 1995)*, but has concentrated much of his interest on the ecology of Rome, a unique example of an urban environment with continuous occupation for more than 25 centuries. The flora, plant communities and habitats have been investigated and new procedures and perspectives on landscape ecology developed, with a synthesis of data and ideas in *L'Ecosistema Roma (The Ecosystem of Rome 1995)*. More recently, after the publication of *I boschi d'Italia (The Woodlands of Italy 1998)*, Sandro has turned his attention to the completion of a long and detailed study of the plants, ecosystems and landscape of the Dolomites due for publication in 2003.

Two strikingly broad and integrative perspectives have developed in Sandro Pignatti's recent work. First, with Elgene Box and Kazue Fujiwara, he has adapted circuit theory to pursue the notion of vegetation as a product of self-organising processes in ecosystems, presenting their current thinking as a keynote lecture at the IAVS symposium at Nagano in Japan in 2000. Then, concerned at the ever-increasing disintegration of relationships between humans and the natural world, he has contrasted the steady state character of ecosystems with expanding industrial production in a theoretical essay *Attacco al Pianeta (Assault on the Planet 1999)* in collaboration with Bruno Trezza. For this, they were awarded the Gambrinus Prize for Ecological Literature.

Sandro Pignatti was a Member of the Commission for Environmental Impact Assessment of the Italian Ministero per l'Ambiente (1992–95), and is a Fellow of the Accademia Nazionale dei Lincei (since 1989), of the Istituto Veneto di Scienze, Lettere ed Arti, of the Academy of Cordoba (Argentina) and of the European Academy of Bolzano. He is a former President of the Società Botanica Italiana, of the Ostalpin-dinarische Gesellschaft für Pflanzensoziologie and of the International Association for Vegetation Science. For his scientific activities, he has been awarded the gold medal of the organisation for Plant Taxonomical Investigation of the Mediterranean Area (1983), the degree of Doctor of Philosophy *honoris causa* from the University of Uppsala (1991), the Order of Merit of the Italian Republic (1994) and the prize of the Academy of Sciences of Turin (2001).

Among all these achievements, Sandro's generous breadth of scientific spirit has had a further profound impact on the development of vegetation science throughout Europe and beyond. Since 1992, he has hosted in Rome the annual workshops of the European Vegetation Survey, a Working Group of the International Association for Vegetation Science with participants from over 25 countries. Dedicated to the adoption of common data and software standards in phytosociology, the encouragement of national programmes of vegetation survey and the development of an integrated overview

of European plant communities, these workshops have played a crucial role in inspiring a new generation of vegetation scientists. The EVS enterprise is marked by a deep commitment to the values of traditional phytosociology and an open-minded attitude to new approaches and applications. Moreover, the 'Rome experience' – the workshops and their associated excursions, always with an exciting tendency to self-organisation, the mixture of scientific integrity, strong friendships and rich aesthetic discoveries – all these have left deep marks of appreciation on the participants. For very many people, this experience is a profound reflection of Sandro Pignatti's own personality.

Now in his 73rd year, Sandro continues his work energetically, still adding to his total of over 300 publications. Daily, his walk to the Orto Botanico takes him in the footsteps of Galileo, who 400 years ago reflected on the grandeur of the universe while walking in the gardens of the Accademia dei Lincei, and of Raphael who, in the loggia of the Villa Farnesina across the street, painted the abundance of nature so exquisitely. In their apartment a short distance away, Sandro and Erika are surrounded by their books, pictures and photographs of their daughter, four sons and three grandchildren, and by the music of their beloved Johann Sebastian Bach. Of these more intimate moments of inspiration, we are all grateful to be beneficiaries.

John RODWELL, Lancaster