

**The Journeys of the Sicilian Botanist Filippo Parlatore  
(1816–1877)**

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**THE GRAND TOURS OF EUROPEAN NATURALISTS  
BETWEEN THE 18TH AND 19TH CENTURIES**

At the start of the 19th century in Europe, and particularly in France, England and Prussia, the methods of pursuing that branch of knowledge known as natural history had undergone radical changes. Plants, animals and minerals were no longer classified according to their appearance and possibilities of utilisation. Those methods had given way to a logical and universal criterion with the goal of promoting a rational understanding of natural objects both by illustrating a single example and by stimulating research on the inter-relationship between that object and other organisms and their natural surroundings (Visconti 1987a:144).

What triggered this new approach was the variety and vast quantity of different fruits, seeds, plants, animals and rocks that had begun to fill botanic gardens, natural history museums, and cabinets, both public and private, in the important capital cities of Europe. This phenomenon was the result of the expeditions organised between 1768 and 1803 by Louis-Antoine de Bougainville, James Cook, Jean-François de Galaup de la Pérouse and Alexander von Humboldt. The following decades saw the continuation of this flow of material increase to the extent that within a short time scholars in the large institutes at Paris, London, Berlin and Vienna found themselves faced with a mass of material, an enormous quantity of different objects. So much so, in fact, that they were compelled to elaborate a new methodology for the study of those objects so as to produce adequate ordering systems, in order to reflect, as closely as possible, the natural order of things as they dwell in nature itself. With this new objective in mind, it was inevitable that the time dedicated to travelling could not be separated from the time devoted to study. In other words, the naturalist could no longer limit himself to studying objects within the four walls of a museum or among his collection cabinets. Hypotheses and theories based on dry and fragmentary specimens (the conservation methods of the time were unable to guarantee their integrity) were even more insufficient to reproduce the complex bonds that exist within a multiform and unimaginable reality. Thus, it became necessary to extend the range of observation, to integrate reading, travellers' tales and the analyses of the incomplete remains. In other words, it was necessary to study the organisms directly in the field to arrive at the comprehension not only of the single isolated specimen but of how it was linked to its surrounding environment (Visconti 1991:62). This was a radical change of viewpoint, the figure of the naturalist-collector disappeared as that of the naturalist-traveller came into being (Dagognet 1970:18–21). This was a new type of explorer, one fitted out with all the instruments and equipment necessary for the study of nature, a scientist who had begun to travel round the world filling in tables of longitude and latitude, measuring the heights of mountains, noting the shape of coastlines, finding the starting points of rivers and following their courses, collecting

meteorological and astronomical data, as well as samples of rocks, plants, seeds, fruit and animals themselves, and then bringing everything home to be analysed, studied, compared and catalogued (Visconti 1987a:145).

#### THE BACKWARD SITUATION OF THE PRE-UNIFICATION STATES IN THE ITALIAN PENINSULA

The Italian travellers found it difficult to enter this current, which proceeded towards the definition, and new knowledge of the world and which, in the period under consideration, achieved results of an extremely high scientific level with Charles Darwin's journey around the world (1831–1836). The political and economic situation of the regions they hailed from was in sharp contrast with the material and intellectual movements of expansion responsible for the great overseas expeditions organised by the northern countries at the time. Therefore, without financial means and lacking cultural directives, but spurred on by their own curiosity, the hopes of making a fortune, or prompted by political necessity, our scholars were compelled to offer their services to other states or to travel at their own expense. This explains the condition of forced isolation that characterised the Italian travellers during the years preceding the proclamation of the unity of Italy, and this is why they could not always bring home the knowledge acquired during their explorations abroad (Visconti 2001:92).

However, the lack of important scientific institutions in their native country posed an even greater obstacle for the Italian naturalists than the difficulties encountered in the organisation of expeditions overseas. None of the regional states boasted an institution of natural history of any note with the material and equipment necessary to permit any comparisons, hypotheses, conjectures, or systematic and repeated experiments on materials collected during explorations (Olimi 1978:481–483). The small private structures set up in the second half of the sixteenth century had long since ceased to have any function for the study of nature and its products. As a result, Italian naturalists found themselves on the margins of the scientific community in Europe (Visconti 1988:204).

Hence the first journey was in search of instruction. In other words, the Italian naturalists had to go to northern Europe to study, to meet and get to know other naturalists and to establish a dialogue with them. More often than not these journeys were carried out at their own expense, sometimes even on foot, but the knowledge they acquired was sound and promising. Up to the middle of the nineteenth century, the city most frequented was Paris, where there were the leading scientific centres of the period: the Jardin des Plantes and the Muséum d'Histoire Naturelle. Other important centres were Berlin, London and Geneva. Even for scholars from the Venetian region and from Lombardy, Vienna was already in decline.

#### FILIPPO PARLATORE'S FIRST JOURNEYS AMONG THE MOUNTAINS OF SICILY AND HIS DEPARTURE FOR GENEVA AND PARIS (1834–1841)

The Sicilian doctor cum naturalist Filippo Parlato<sup>1</sup> (Fig. 1) was born in Palermo in 1816, into a family of merchants. He attended school in his home town and, at the end of 1831, he enrolled in the Faculty of Medicine at the local university. Later on, in his *Memorie*<sup>2</sup>, he attributes this choice not so much to a vocation, a desire to dedicate his life to caring for the sick and ailing, as to a not better defined wish than "to learn about natural sciences" (Parlato 1992:43). This rather vague attraction for the study of nature was more clearly defined during the months following graduation in 1834 when a series of accidents and circumstances of a personal nature encouraged the

young doctor to dedicate himself with greater attention to botanic studies (Parlatore 1992:50–57). These were the years of his first excursions, his first short trips. On October 1834, when climbing to the top of the Mezzagno, just above Palermo, looking for some plants, he suddenly came face to face with two men who tried to stop him by throwing stones at him. They wanted to rob him. Parlatore tore straight down the mountain and, leaping from one rock to another as he glanced behind to dodge the stones, he was finally spotted by two peasants who bore him to safety (Parlatore 1992:55). Two years later, while climbing Mount Gibilmesì, the highest of those around Palermo, Parlatore felt the ground move. He jumped aside just in time to see the piece of mountain he had been standing on move downwards as a landslide gathered force. “My

sight clouded over at that moment, my knees trembled; it was a miracle that I had not been swept over the cliff. Alas, what a price to pay for these miserable spoils for science! So many sacrifices, so much suffering and danger! [ . . . ] When you think of a poor man in the open country, going up mountain peaks and ledges, around lakes and along rivers, exposed to the inclemencies of the weather, and all this hardship and danger without accumulating riches, with no hope of any recompense save that of having, in some fashion, contributed to the progress of science. I found myself within an inch of death” (Parlatore 1992:56).

These trips were followed by Parlatore’s first publications, among which *Flora panormitana, sive plantarum prope Panormum sponte provenientium enumeratio* (Parlatore 1839) is particularly noteworthy. With this text Parlatore made himself known and initiated his correspondence with other botanists and naturalists in the Italian peninsula. During the summer of 1840, a certain Theodor von Heldreich<sup>3</sup> arrived in Sicily. He was the keeper of the rich herbarium belonging to the Geneva botanist Augustin-Pyramus de Candolle.<sup>4</sup> He wished to collect some Sicilian plants to add to the herbarium. This first important encounter for Parlatore resulted in an invitation to Geneva to collaborate in *Prodromus systematis naturalis regni vegetabilis*, Candolle’s universal classification project. Parlatore agreed to leave Palermo and even managed to obtain a financial contribution towards the journey from the government (Tirrito 1879:14). In October of that year he left for Geneva. During his journey northwards through the peninsula he stayed for brief periods in the more important cities, and there he finally met some of the more important botanists from various regions in Italy: Michele Tenore in Naples; Carlo Luciano Bonaparte in Rome; Paolo and Pietro



FIGURE 1. Filippo Parlatore

Savi and Antonio Tragioni Tozzetti in Florence; Antonio Bertoloni in Bologna; Giuseppe Moretti in Pavia and in Milan Giuseppe Balsamo Crivelli.<sup>5</sup> From Milan he continued his journey, heading for Mont Cenis (Parlatore 1992:76–87). In Geneva, where he arrived in April 1841, he learned much about the direction in which the scientific world in Europe was moving. In particular, he was introduced to the study of plants according to the “natural system.” This was the field of study that best responded to the technical and scientific progress of the time because it was based on the recent improvements in microscopical observation instruments, on progress in plant organography and morphology, on developments in chemistry, and on the opportunity of having a vast range of specimens available. However, Parlatore did not stay long in Geneva. It is most likely that it was Candolle himself who advised the young naturalist to visit the scientific institutions in Paris in order to perfect his recently acquired knowledge and become familiar with the instruments necessary for the continuation of the studies commenced in Geneva.

Parlatore reached Paris in May 1841. Here, with great interest and good results, he assiduously frequented the lectures given by the great naturalists of the time. He left some vivid descriptions of some of them: I: Achille Richard<sup>6</sup> who “taught the natural history of medicine in the *École de Médecine* and was renowned for the simplicity of his lexis and for the clarity and order of his lessons. He was in charge of the little garden in the *École* [ . . . ] and he used to take the students on botanical tours around Paris in the appropriate seasons and on Sundays. I went to many of his lectures and I often accompanied him on his trips, to Saint Cloud, to Bondy and elsewhere to get plants and to study them. He knew almost all the botanists in Paris, so you were almost certain to find them at this house and that is why his conversations in the evening were so pleasant” (Parlatore 1992:90); II: Adolphe Brongniart<sup>7</sup>, Professor of Botany at *Jardin des Plantes*, “was to be considered one of the most illustrious botanists of his time, an authority on the families in nature and on fossil plants and well versed in organography and vegetable physiology, he had been responsible for much progress in the science and for this reason was greatly respected by his followers. But although his lectures on families in nature were very clear and often contained original concepts, they were not very enjoyable because they were not easy nor was his diction pleasant: his naturally cold manner tended to keep young people or acquaintances at a distance rather than attract them” (Parlatore 1992:90); III: Adrien de Jussieu<sup>8</sup>, Professor of Herborization, “who was untiring in his love for his pupils and whose keen intelligence and profound studies are recognisable in the knowledge displayed in his few publications” (Parlatore 1992:90–91); IV: Joseph Decaisne, guardian of the herbaria, “still a young man, kind-hearted and always ready to be helpful, yet of severe appearance” (Parlatore 1992:91); V: Charles-Francois Brisseau de Mirbel,<sup>9</sup> Professor of Plant Physiology at the Sorbonne, at whose lessons “there were often only two students who, undeterred by the boredom of the lessons, were at all costs determined to learn about that part of botany from him. They were Pietro Cuppari and myself, both of us Sicilians” (Parlatore 1992:91).

Parlatore attended many other lessons. He describes his intense days as follows “I studied in the museums, chiefly in the Cuvier Museum of Comparative Anatomy, in the herbariums, in *Jardin des Plantes*, I always went to the meetings of the *Académie des Sciences* and of the *Société Filomatique* [*sic*] which has honoured me by nominating me a corresponding member; I wrote various little articles, working uninterruptedly from before daybreak to late evening, to the amazement of those scholars who, as Gaudichaud said, nicknamed me *notre allemand*” (Parlatore 1992:103).

However, the encounters that turned out to be fundamental for Parlatore’s future career did not come about in a university environment. They were with two acquaintances who, like himself, were not Frenchmen but had decided to pursue their scientific activities in Paris. One was the renowned German naturalist, Alexander von Humboldt,<sup>10</sup> and the second was the famous English connoisseur of natural science, Philip Barker Webb.<sup>11</sup>

THE ROLE OF ALEXANDER VON HUMBOLDT  
IN PARLATORE'S GEOBOTANIC JOURNEYS

We shall first examine the relationship between Parlatore and Humboldt. The German naturalist's role was twofold: he acted as protector and teacher. With ease and alacrity, thanks to his acquaintances in the upper political and scientific circles, Humboldt managed to obtain permission from King Ferdinand of the Two Sicilies for Parlatore to prolong his sojourn in Paris so that he could continue his studies. Humboldt, furthermore, succeeded in having Parlatore nominated Professor of Botany at the Museum of Physics and Natural History in Florence, a position Parlatore held from 1842 until his death in 1877. But above all, Humboldt opened up new perspectives of work and study for the young botanist. He taught Parlatore that plants were to be considered not only from the morphological and systematic point of view but, in order to construct the bases for a great geographic picture of the earth, their distribution in space could not be ignored. Then, through a rational consideration of nature and its subjection to man's intellect, this enormous geographic picture was to comprehend the unity of different aspects of natural environments and the interconnections between apparently different events, facts and phenomena.<sup>12</sup> As we shall see, it was only with great effort and difficulty that Parlatore succeeded, at least in part, in following the precepts of the German scientist. In fact, Humboldt's geobotanic concepts called for vast scientific knowledge as well as the possibility to carry out exploration trips abroad. The financing of enterprises of this nature was far beyond the meagre resources of a small regional state such as the Granduchy of Tuscany (Visconti 2001:103). Nevertheless, Parlatore managed to bring Humboldt's thought, his lessons, to Italy and introduce Italian scientists to the breadth of the German naturalist's scientific thinking.

Parlatore took his first step towards the construction of a geobotanic picture in August 1849 when he ventured up the Western Alps in order to approach nival, and periglacial vegetation, the only type in the whole of Italy as yet unknown. In particular, his intention was "to note, with barometric observations, at what height above sea level each plant starts growing and at what elevation it ends; to get to know the flora of the great glaciers and the last plants indicating life at the extreme limits of the eternal snows; and finally, to carry out a monographic examination of an isolated Alpine mountain for botanic geography" (Parlatore 1992:181). The area chosen was the Mont Blanc chain, an area repeatedly and extensively visited by the Swiss naturalist Horace-Bénédict de Saussure and by the English geologist James D. Forbes, both keen researchers on that part of the Alps. Parlatore followed their descriptions faithfully when reporting his own impressions. What results is a clear picture of the deep contrast between his brief, two-week alpine trip in the company of a local guide and the repeated, lengthy naturalistic sojourns of Saussure and Forbes that lasted for years and were carried out with the help of explorers, guides, hunters and bearers, laden with every kind of scientific instrument, not to mention all the equipment necessary to guarantee, amid the innumerable dangers offered by the alpine environment, the safety and survival of all members of the expeditions, men and animals alike.<sup>13</sup>

Considering that the alpine environment was unknown to him and could, to a certain extent, have been considered hostile, Parlatore undertook his enterprise with great courage. Indeed, his contemporaries were amazed and full of admiration. "I met with great discomfort and many dangers on that journey. The worst were while climbing Col du Géant when, at about 2,800 metres above sea level, there was a dreadful storm, and then, during the trip to Jardin there was a succession of avalanches just I was passing below the Trélaporte Glacier. However, at that time I was still very young and healthy even if I was not so strong; and I did not lack courage. Fatigue did me no harm and each day I was always fresher than ever and more anxious to leap and bound ahead

among the glaciers” (Parlatore 1992:181). His account of the journey, published under the title *Viaggio alla catena del Monte Bianco e al Gran San Bernardo* (Parlatore, 1850) was written in the form of letters to his friend Emilia Parvopassu [née Bolmida] whom Parlatore had charged with the task of observing the different colour of the sky in Turin, using a cyanometre he had left her, while he carried out the same observations at the top of the Mont Blanc chain. The floristic specimens examined and the scientific observations carried out during this brief expedition were remarkable from a geobotanic point of view and increased Parlatore’s interest in botanic geography.

The following summer he attended a meeting of the British Association for the Advancement of Science at Edinburgh. For a couple of days he went herb hunting in the Scottish Highlands in the company of the English naturalist John Ball.<sup>14</sup> The description of one of these outings in his *Memorie* reads as follows: “ We headed for one of those peaks and climbed up to the top making a fine collection of beautiful plants on the way. Many of these, some growing only in northern or even Arctic regions, I was collecting for the first time. This aroused in me a desire to approach the North Pole, to see with my own eyes the flora of that glacial area, and to mark the boundaries of the different species in the different latitudes there. During that outing and while travelling to Glasgow the next day I continued to admire the natural beauty of Scotland, the gentle grassy slopes of those mountains, the rivers flowing down into the valleys, the waterfalls, the lovely lakes with their vague little islands” (Parlatore 1992:187).

Parlatore was so fascinated by the cold areas that he finally accepted Humboldt’s proposal to explore the Scandinavian peninsula.<sup>15</sup> This time it was a real naturalistic expedition, with an expert guide to the Nordic flora, an interpreter, and six bearers (Parlatore 1992:198). It was the Granduke of Tuscany himself who financed and supported the expedition; he provided the not inconsequential sum of £5000. In May 1851, Parlatore went to Berlin to work out the details of the itinerary with Humboldt and to get advice from another German scientist, the geologist Leopold von Buch,<sup>16</sup> who had just returned from a long visit to Lapland. The upshot of this meeting was a programme with departure planned from Stockholm, destination the North Cape, and return to Oslo. This itinerary sought to reconcile the phytogeographic scope of the expedition with the brevity of the season suitable for gathering the plants. The journey, which had been planned with great care, and devoting attention to the risks involved because of both the climate and the isolation, very soon turned out to be extremely difficult and arduous for the Sicilian botanist. It was only with great effort on his part that he managed to carry out the programme.

Parlatore describes the hardships of the journey in his *Memorie*: “It rained constantly and heavily, there were often thunderstorms with great downpours. These caused great discomfort because we had no shelter and so, not only were we soaked through and we were often forced to dry our clothes by the fire, but our provisions suffered, began to go bad and soon ran short. This was a serious state of affairs for everyone but even more so for me [...] At every step we took I had to stop to dig up plants and note the relevant observations, so I often lost sight of the others and remained for hours, sometimes even a whole day, completely separated from them. Neither they nor I had any means of communicating where we were because the muskets we had originally used for signalling our positions had been damaged by the rain. Those hours were agonizing for me because if we missed each other, I had no means of nourishment even if I did succeed in getting out of those deserts alive” (Parlatore 1992:198–199).

Later on matters grew worse and the situation became even dramatic: the hardships suffered, the shortage of supplies, the intense cold and the lack of sleep resulted in an incipient paralysis for Parlatore. He recovered from this, but only partly so, after a long period of treatment, first in Oslo and then in Florence, where he arrived in the spring of 1851. For the rest of his life he suffered the effects of the privations endured in Scandinavia.

On his return to Tuscany, Parlato decided to publish his account of the places he had visited under the title *Viaggio per le parti settentrionali d'Europa* (Parlato, 1854). He wished "to give a description of a part by no means small of our Europe [...] and of faraway regions hitherto little known" (Parlato 1854:VI). These descriptions were accompanied by a map of the northern regions of the Scandinavian peninsula, where the inaccuracies still current in the second half of the nineteenth century were amply rectified. For the time being, he postponed the presentation of the scientific results of the observations made throughout the trip. But the second part was never published. This abandonment was not favourably received by the Italian naturalists who had awaited the completion of his work with a certain impatience. They were probably hoping that the work of the Sicilian botanist would contribute to bringing Italian scientific culture beyond the confines of the peninsula.<sup>17</sup>

Even in recent times, botanists have wondered, and with a certain regret, about Parlato's limited scientific production, without, however, fully understanding all the motives. One of the most interesting hypotheses that has emerged is that of Giovanni Negri, who has attributed the paucity of the phytogeographic papers of the Sicilian naturalist to a tendency to prefer description and classification rather than the construction of conceptual schemes of a general nature (Negri 1927:991).

We feel we can add to this conjecture in view of the information contained in Parlato's scientific publications and also in his extra-scientific writings, in particular his *Memorie* and correspondence.<sup>18</sup> The fact that Parlato did not publish the phytogeographic research on the Scandinavian peninsula may well be connected with Humboldt's death and the ensuing interruption of the famous German naturalist's project to publish a treatise of general botanic geography within which the description of the Scandinavian plants was to have been inserted.<sup>19</sup> Thus, finding himself suddenly without the necessary framework for the elaboration of the data collected during the Scandinavian expedition, we think that Parlato may have decided to give up on Humboldt's idea of a treatise proper of botanic geography, and to use his phytogeographic knowledge of the cold regions for the understanding and description of plants from the Alps and the Apennines that were illustrated in *Flora italiana*, which was, as we shall see, by far his most important work. In fact, the geobotanic mysteries in the mountainous areas of the Italian peninsula continued to fascinate Parlato. Still, in 1869, we find the following note: "In order to extend my studies on botanic geography and to compare the flora in Lapland, Finland, Sweden and Norway with that from our mountain regions with a similar climate I thought I would start by spending some periods during the summer in the higher regions of the Alps and the Apennines. This way I thought that spending some time in one place and some time in another would give me the opportunity to examine with diligence first one, then another Alpine region and the region of the fir and the beech, to collect all the plants in each region, to note the height above sea level, where they were to be found in greater or less abundance, variations in their forms and so on, and, at the same time to describe in situ living plants in those regions for my work *Flora italiana*" (Parlato 1992:211).

But Humboldt's death could not have been the only reason for slowing down Parlato's phytogeographic work. The profound political and cultural changes that followed the annexation of Tuscany to the Kingdom of Italy (1859) also brought about a change in the direction of his work as a naturalist. Parlato, who, as we have seen, had been called to Florence by Leopold II on Humboldt's advice, was suddenly faced with a new atmosphere, totally different from that which the Grand Duke, open to and interested in the sciences, had tried to create in Tuscany. Instead of the great attention that Leopold and his family had dedicated to the natural sciences, what now reigned was the rigid, military-like attitude of King Vittorio Emanuele II. Parlato met him in September 1861, when the first Exhibition of Italian Products was held in Florence.<sup>20</sup> His description of the new sovereign's behaviour during an official dinner on the occasion of the opening of

the Exhibition reads as follows: “The king ate nothing because, as usual, he had dined at midday; he sat there with his sabre between his legs, gripping his helmet with one hand [...] He appeared to be very bored [...] Then he withdrew”. (Parlatore 1992:350).

THE HERBARIUM CENTRALE ITALICUM AND THE *FLORA ITALIANA*: THE BASIS  
OF PARLATORE’S JOURNEYS THROUGHOUT THE ITALIAN PENINSULA

The political climate that followed the proclamation of the unity of Italy moved Parlatore to assume an attitude of growing incomprehension towards the multitude of complex and problematic situations facing the Italian government at the time. Personally he remained totally and irrevocably faithful to the memory of the Grand Duke Leopold and his family. His negative approach led to an attitude of permanent diffidence regarding all functionaries of the new state, whether they were politicians, agronomists, economists or scientists. It also dissuaded him from taking on any official duties that might have brought him into contact with the new Italian governing class.

However, up to the very last, he was both assiduous and unfailing in his activity adding to the Herbarium Centrale Italicum and to prepare the text for *Flora italiana*.

His project foresaw a great herbarium that would bring together the greatest possible number of specimens of plants. This collection was to give Italian botanists the opportunity to carry out all the analyses and comparisons required to produce modern monographs based on the natural affinity of plants rather than the outdated and artificial system of classification. The project had been perfected in Paris in 1841, in the course of Parlatore’s frequent encounters with a wealthy English gentleman, Philip Barker Webb. The idea had been supported by Humboldt, who had actually suggested to the Grand Duke Leopold II that Parlatore should be appointed professor of botany at the Florence Museum. The Grand Duke had accepted the suggestions of the German naturalist, founding both the Chair of Botany and the Herbarium in 1842. (Parlatore 1992:104). For his part, the Sicilian scientist, who had settled in the Tuscan capital that same year, had called for the collaboration of all Italian and foreign scholars. Strongly supported by Barker Webb and availing himself of the latter’s network of contacts with French, English and Spanish botanists, Parlatore succeeded in convincing them to participate in the initiative; he received thousands and thousands of specimens from all corners of the earth. It was Webb who helped him most of all. He actually bequeathed his rich collection to the Grand Duke of Tuscany (1854).

Shortly thereafter, Parlatore decided to start work on *Flora italiana*, a general synthesis of the vegetation in Italy, a work to which he dedicated the remainder of his life. From the start, beginning with the first volume<sup>21</sup>, this work differed completely from the arid, descriptive, pretentious catalogues hitherto published by other contemporary Italian botanists; it promised to be ultra-modern. It was in fact the result of a complex research structure within which the natural method of classification, based on an analysis of all the organs of plants and on their organisation as a whole, was used as a means of reaching an exact diagnosis of the individual, and hence to determine its genus and species. This was followed by a description based on observations made during continual journeys *in loco*, to the actual environment of the illustrated plant, besides the representation of geographic views and the collection of ecological annotations on the families.

The original project had been conceived at the Congress of the Scientists of Naples<sup>22</sup> in 1845, on the proposal of the botanist Guglielmo Gasparrini. During the years that followed, several naturalists in the peninsula contributed to perfecting it, and it was officially presented at the Congress of Scientists of Venice, in 1847. While preparing the volumes, Parlatore again appealed to his Italian colleagues for suggestions, data, information and specimens required to enable him carry out his work of analysis, comparison and classification. In addition to this activity, which consist-



ed mainly in letter-writing, Parlatoe also undertook numerous journeys throughout the peninsula during the year and especially in springtime. At times these were short trips or excursions and, on these occasions, he was often accompanied by local naturalists. Thus, he visited many places personally to collect and examine specimens missing from the collection.

We will limit ourselves to mentioning a few of his excursions, simply to illustrate how, despite his physical problems deriving from the hardships endured in Scandinavia, Parlatoe continued to visit the mountainous regions of the peninsula, climbing the Alpine and Apennine peaks, ostensibly to collect specimens for the *Flora italiana*, but maybe secretly hoping he would not be compelled to interrupt the botanic geographic studies he had commenced with Humboldt.

In the summer of 1854, he climbed the Viù Alps, reaching Rocciamelone. From there he went to Lanslebourg where he collected herbs to his satisfaction. On this occasion he described a curious episode as follows: "I had collected a plant with particular care as it was one I wanted to keep alive in order to describe it in *Flora italiana*. I knew that *Bulbocodium vernum* Linn. that flowers in March/April grew in the meadows nearby but in that season it had neither flowers nor leaves. I had the ground dug up here and there to look for the bulbs of the plant that I knew would be hidden underneath. I managed to find some and I was able to bring them to Florence. I planted them in pots and the following spring appeared the flowers I described in the third volume of my *Flora italiana*." (Parlatoe 1992:212).

Two years later he travelled briefly through the Marche and the Abruzzi, "the two most important spots for the Italian flora since together these regions contain so many different flora. And indeed, at their southernmost boundaries there are some plants of the polar regions, there are others proper to the Central European Alps; there can be found some species that can be considered characteristic of the Apennines and the first signs of flora found in the Orient. [ . . . ] I went to Monte dei Fiori and at the top I found the *Saxifraga porophylla* Bert., and I made two important excursions, one to Monte Vittorio and to Castelluccio and the second to Pizzo de Svevo" (Parlatoe 1992:252).

In July 1860, having concluded his description of the monocotyledons with the third volume of *Flora italiana*, he turned his attention to the dicotyledons, which he started collecting during his honeymoon in Savoy and Switzerland (Parlatoe 1992:345).

The following summer he stayed in Valtellina and made one trip to the Stelvio Pass and another to Alpe Planghera. This is what he tells us: "on [July] 27 I went to Stelvio. I set out at five o'clock in the morning, I wanted to go the whole way on foot to collect plants [ . . . ] At half past two in the afternoon I finally reached the so-called Pass, from where one descends into Tyrol. From there I could see the Trafoi Valley and as there was a clear sky I was able to pick out the Ortler Spitz, an extremely high peak completely covered with snow, just like Mont Blanc. [ . . . ] On August 1, I went to Santa Caterina, collecting herbs on the way in Val Furva and there going through the woods overlooking the thermal baths I gradually climbed up Alpe Planghera as far as the region of the eternal snows. On that trip I was delighted to be able to find many rare plants, among which I shall note here the very rare *Linnaea borealis*" (Parlatoe 1992:345–346).

On the 1st of July, 1862, he went to Boscolungo from where he made two trips: "Of the outings from Boscolungo I shall record that of July 9 to the top of Libro Aperto where, for the first time in that part of the Apennines I found the *Rhododendron ferrugineum* L., commonly known as the Rose of the Alps. Then there was a second, more tiring and longer trip, to Alpe di Barga and also amid those rocks I did not fail to collect some rare plants, among which *Artemisia*" (Parlatoe 1992:370–371).

The next summer he stayed in the area around Brescia where he made several excursions. One of these, to Corna Blacca, he described as follows: "This is a mountain about 2000 metres above

sea level. It is one of the chain of the Dolomites that precedes the granitic Alpine chain. Its rocks rise up on the nearby mountains almost as if they were perpendicular towers. [. . .] It was one of the most important excursions I made in the Alps, because of the rarity of the species I was able to collect and then describe. Among them I wish to cite *Saxifraga arachnoidea* Sternb., *Silene elisabethae* Jan, *Ranunculus bilobus* Bert., *Scabbiosa vestina* Facch. [. . .] and many others” (Parlatore 1992:372–73).

These collections were so interesting that Parlatore could not resist returning to the region of the Lombardy Alps the following year. In 1864, with his wife and daughter, he spent the whole of July in Tirano. From there he made important trips to Dosso Alto, to Monte Ario and to Monte Pezzeda, and between storms, heavy downpours and even hailstones, he managed “to collect some rare plants, among which the rare and beautiful *Daphne rupestris* Facch. and *Campanula elatinoidea* Moretti” (Parlatore 1992:374). He also returned to the Stelvio Pass for the second time and the trip was particularly rewarding: “I went right on to the point where all vegetation ended, both on Monte Braulio on one side and on the other side on Monte Cristallo. The latter owes its name to the fact that it gleams like crystal because of the splendid glaciers that from there on stretch along a whole chain of mountains as far as the sublime Orter Spitz. Nor was I disappointed because I was thus able to gather many small plants such as the Androsace and others that in the form of little tufts remain underneath the snow for ten or eleven months, only revealing their beauty with lots of tiny flowers, often rose-coloured, for a few days every year” (Parlatore 1992:375).

His numerous naturalistic journeys in the Apennines and the Alpine regions sharpened Parlatore’s powers of observation of plants and at the same time intensified his sentiments for the natural environment in mountainous regions, stimulating him to overcome the specificity of the botanic collection and to consider the extensive network of connections that gives rise to great environmental configurations. This is a clear sign of his never having abandoned his aspiration to follow the basic guidelines of Humboldt’s vast geographic concept. And in our opinion, an indirect reference to these new horizons, persistently followed but in great solitude, is to be found in this passage from the *Memorie*. Here emerges Parlatore’s attempt to understand environmental configurations through the intersection of naturalistic and human events: “It was a saddening sight that appeared before our eyes along the road from Tresenda to Tirano. A few days beforehand, a veritable torrent of mud and stones had descended from one of those valleys alongside and had levelled walls and covered fields carrying with it devastation and ruin. Unfortunately, damage such as this is not rare in Valtellina since the mountains overlooking the narrow course of the river Adda are high and steep, at times very steep and particularly since the beech forests and pine forests that have been destroyed, to a large extent, used to absorb the water and hold back the earth when, in summertime, the snows melted” (Parlatore 1992:375).

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#### NOTES

<sup>1</sup> For Filippo Parlatore (1816–1877) see D’Ancona, 1877; Tirrito, 1879; Haynald, 1879; Cesati, 1879; Negri, 1927; Parlatore 1992.

<sup>2</sup> The volume, published posthumously (Parlatore, 1992), deals with the events concerning Parlatore’s

scientific activity, his travels for study and for naturalistic exploration, as well as his impressions of the political situation, and also his private life over the period from 1816 to 1866.

<sup>3</sup> Theodor von Heldreich, born in Dresden in 1802, was the keeper of the herbarium of Candolle. In 1845, he was appointed director of the Botanical Garden in Athens.

<sup>4</sup> Augustin-Pyramus de Candolle (1778–1841), professor of botany in the Academy of Geneva, started writing *Prodromus* in 1824. His son finished the work in 1873. Parlato collaborated with a monograph on conifers and on gnetaceae published in the XVI volume, sectio postuma, pp.345–612.

<sup>5</sup> Michele Tenore (1780–1861), professor of botany and chief keeper of the Botanical Gardens of the University of Naples, was the author of *Flora napolitana* (Neapolis 1811–1838); Carlo Luciano Bonaparte (1803–1857), zoologist, in particular dedicated to the study of birds and vertebrates, spent a long time in the USA; Paolo Savi was professor of zoology and mineralogy at the University of Pisa; Pietro Savi (1811–1871) Paolo's brother, was professor of botany and chief keeper of the Botanical Garden of the University of Pisa; Antonio Targioni Tozzetti (1785–1856) was professor of botany and taught medical subjects and chemistry at the Arcispedale of Santa Maria Nuova, besides being director of the Fine Arts Academy; Antonio Bertoloni (1775–1868) taught in Genoa and in Bologna and was the author of *Flora italica* (Bononiae 1833–1854); Giuseppe Moretti (1782–1853) was professor of botany and chief keeper of the Botanical Garden of the University of Pavia; George Balsamo Crivelli (1800–1874) taught natural history in the two high schools in Milan and later taught in Pavia.

<sup>6</sup> Achille Richard (1794–1852), professor of botany at the Ecole de Médecine, the author of several books on pharmaceutical botany, is well known for his “Essai sur l’Ile de Cuba” included in the *Histoire naturelle de l’Ile de Cuba* (Paris 1845–1855) by Ramon de la Sagra.

<sup>7</sup> Adolphe Brogniart (1801–1876) was professor of botany and chief keeper of the Botanical Garden of the Muséum d’Histoire Naturelle.

<sup>8</sup> Adrien de Jussieu (1797–1853), physician, author of works on systematics.

<sup>9</sup> Charles-François Brisseau de Mirbel (1776–1854) was professor of culture, i.e., of subjects pertaining to the growth of plants and the various systems adopted for their multiplication, at Jardin des Plantes.

<sup>10</sup> Alexander von Humboldt (1769–1859), on his return from America spent a long time in Paris in order to publish the scientific results of his data, of his observations and of the material he had collected during his explorations in Colombia, Venezuela, Spanish Guyana, Cuba and Mexico. In 1827, he moved definitively to Berlin where he held the chair of physical geography, specially founded for him by Frederick William III of Prussia. However, he often returned to the French capital, on diplomatic missions on behalf of Frederick William IV of Prussia, in particular from 1840 onwards.

<sup>11</sup> The wealthy English botanist and traveller Philip Barker Webb (1793–1854), who lived on the Canary Islands for a time in the 1830s, is noted for his *Histoire des Iles Canaries* (Paris 1848). He bequeathed his rich herbarium and his valuable library to the Grand Duke of Tuscany (Visconti 1993).

<sup>12</sup> For Humboldt's naturalistic-geographic view see, among others, Farinelli, 1991; Humboldt, 1992; Humboldt, 1998.

<sup>13</sup> For these descriptions see Saussure, 1779–1796; and Forbes, 1843.

<sup>14</sup> The Irishman John Ball (1818–1889) travelled extensively in the Alps and in the Pyrenees, in Morocco and in Algeria.

<sup>15</sup> For the project for a universal geography of plants that Humboldt had thought up with the Swedish botanist Georg Wahlenberg (1780–1851), see the letter Humboldt wrote to the King of Sweden, Oscar I, dated 22<sup>nd</sup> May, 1851 (Rodolico, 1968:117).

<sup>16</sup> Leopold von Buch (1774–1853), who spent two years in Scandinavia, reported the results of his observations in *Reise durch Norwegen und Lappland* (Berlin 1810).

<sup>17</sup> Up to then, very few Italian naturalists had undertaken important scientific journeys. Among them, however, were the Piedmontese botanist Carlo Giuseppe Bertero, who had been to the Antilles between 1811 and 1821; Giacomo Costantino Beltrami, author of *La découverte des sources du Mississippi et della Rivière Sanglante* (New Orleans, 1824), an account of his wanderings in search of the head of that great American river; the naturalist Giovan Battista Brocchi, who had collected plants in Egypt between 1822 and 1826; Agostino Codazzi and Antonio Raimondi, perhaps the two better known Italian travellers during the period

before the proclamation of the unity of Italy. The former had carried out his scientific activity in Venezuela and Colombia, whereas the latter had been active in Peru. Then, lastly, Giovanni Miani who had travelled in Africa in 1859 in search of the source of the Nile.

<sup>18</sup> Parlatore's correspondence, consisting of thousands of letters addressed to the most renowned Italian and European scientists, is conserved in the Municipal Library of Palermo, with other manuscripts of his (the originals of all his works, published and unpublished, the diaries of his journeys and the notes relating to his teaching activity).

<sup>19</sup> In November 1851, Humboldt wrote to Parlatore reminding him of his project regarding the botanical geography of Europe (Rodolico 1968:118).

<sup>20</sup> The exhibition, which represented an initiative of the Grand Duchy that had petered out with the annexation of Tuscany, appeared in a new guise, as a unifying affirmation. It was as if it were an invitation to the Italians to get to know each other in the sphere of their economic activity. Despite certain limits and omissions, it was the first step towards the formation of an Italian industrial concept and towards the construction of a homogeneous entrepreneurial mentality (Caizzi 1965:262–263).

<sup>21</sup> The first volume was published in 1848; successive volumes came out in 1852, 1858, 1867 and 1873. The work was completed in 1890 by Teodoro Caruel, one of Parlatore's pupils.

<sup>22</sup> The congress was the seventh of the nine national Congresses of Italian scientists that were held in various Italian cities throughout the peninsula between 1835 and 1847. The idea was conceived by Carlo Luciano Bonaparte and a few Tuscan naturalists, some of whom were: Vincenzo Antinori, Givan Battisti Amici, Gaetano Giorgini, Paolo Savi and Maurizio Bufalini, all of whom were aware of how much interest events of this nature had aroused in Germany in recent years. Originally the Congresses were divided into six sessions: chemistry, physics and mathematics; geology, mineralogy and archaeology; botany and plant physiology; zoology, comparative anatomy and physiology; agronomy and technology, medicine and surgery. Later on, chemistry, surgery and archaeology were each treated in different sessions.

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