MUSEOLOGIA SCIENTIFICA nuova serie • 11: 61-69 • 2017 ISSN 1123-265X
Museologia descrittiva e storica

Relief maps by Mario Strani at the Civic Museum of Natural History of Verona and at the Civic Didactic Museum of Natural Sciences "Mario Strani" of Pinerolo (Torino, Italy)

Anna Vaccari
Roberto Zorzin
Civic Museum of Natural History of Verona, Geology and Palaeontology Section, Lungadige Porta Vittoria, 9. I-37129 Verona.
E-mail: anna_vaccari@comune.verona.it; roberto_zorzin@comune.verona.it

Massimo Martelli
Civic Didactic Museum of Natural Sciences "Mario Strani", Viale Rimembranza, 61. I-10064 Pinerolo (Torino).
E-mail: fungifungiconservatore@gmail.com

ABSTRACT
The Civic Museum of Natural History of Verona holds a collection of more than 20 geological relief maps representing Italian distinctive and features landscapes. They were created between 1945 and 1965 and today they are still part of the exhibition itinerary, contributing to the realization of a clear museographic project, developed by Angelo Pasa, at that time curator of Geology, and by Mario Strani (1907-2000), eclectic dentist from Verona with a passion for natural science. The models conceived, realized and donated by Strani are hand-painted plaster-cast models, three-dimensional representations to various scale of the geology and geomorphology of the most important Italian regions, from east to west throughout northern Italy, from the Colli Euganei in the region of Veneto to Albenga, on the Gulf of Genova in Liguria. In addition to the finished models, exhibited and not, the collection includes one hundred plaster items, which show the technique used by Strani for their construction. The description of the method he used is possible thanks to the contribution of Strani's collaborators, who took part in the opening of the Civic Didactic Museum of Natural Sciences of Pinerolo, named after him, where 3000 models of fungi and 9 terrain models are displayed.

Key words:
geological relief maps, Mario Strani, Museum of Verona, Museum of Pinerolo.

RIASSUNTO
I plastici di Mario Strani del Museo Civico di Storia Naturale di Verona e del Civico Museo Didattico di Scienze Naturali "Mario Strani" di Pinerolo (Torino, Italia).

Il Museo Civico di Storia Naturale di Verona conserva una raccolta di plastici geologici, realizzati tra il 1945 ed il 1965, ancora oggi presenti nel percorso espositivo. Sono oltre 20 rappresentazioni di alcune emergenze del territorio italiano che tracciano nel loro insieme un progetto museografico ben preciso, realizzato da Angelo Pasa, conservatore allora per la Geologia, e da un personaggio eclettico, il dr. Mario Strani (1907-2000), medico odontoiatra veronese appassionato di scienze naturali, che in pratica ideò, realizzò e donò questi plastici. Costruiti in gesso e dipinti a mano, riproducono tridimensionalmente a varie scale la geologia e la geomorfologia delle aree italiane più importanti e significative, seguendo in particolare un ideale tracciato est-ovest per tutta l'Italia settentrionale, dagli Euganei fino al Golfo dell'Albenga in Liguria. La raccolta comprende, oltre ai plastici finiti esposti e non, anche un centinaio di elementi in gesso rimasti a testimonianza della tecnica utilizzata da Strani per la loro costruzione. Il procedimento che qui viene descritto è stato ricostruito grazie ad alcuni suoi collaboratori, che parteciparono alla realizzazione del Civico Museo Didattico di Scienze Naturali di Pinerolo, a lui intitolato, dove sono esposti circa 3000 modelli di funghi e 9 plastici.

Parole chiave:
plastici geologici, Mario Strani, Museo di Verona, Museo di Pinerolo.

INTRODUCTION

The Civic Museum of Natural History of Verona (see website n. 1) holds and partly displays a series of geological plastic models, which may seem an unusual collection for a natural history museum. This project includes not only representations of local areas, but also consists of approximately 20 relief maps of Italian features landscapes that are all part of a clear museographic project. This project took shape at the end of World War II, between 1945 and 1965, under the guidance of Francesco Zorzi (1900-1964), director at that time, assisted by Angelo Pasa (1911-1966) for geology and palaeontology, Sandro Ruffo (1915-2010) for zoology, and many other passionate volunteers and collaborators who actively helped in the reconstruction of the museum. Among these was Mario Strani (1907-2000), honorary curators of the museum, eclectic dentist from Verona with a passion for natural sciences (Ruffo & Curi, 2005), who conceived, realized and donated the models to the Museum.

The workshop "The Plastic Representation of the Territory between the Nineteenth and the Twentieth century" organized on 29 November 2013 in Florence by the Italian Military Geographic Institute (IGM), the Italian National Institute for Environmental Protection and Research (ISPRA) and the Italian Centre for Historical and Geographical Studies (CISGE) inspired our research on Strani and his works. From the beginning, we realized that in the Museum's archive we could find almost nothing regarding his collaboration with the Museum nor about the realization of the plaster models, although his contribution to the exhibition design of the rooms dedicated to Historical Geology and to Minerals was undeniable.

We do not know whether the idea that led to this exhibition choice came from Strani or Pasa. However, what we know with certainty is that Pasa, who held the chair of technician of the Geology Department at Torino University from 1934 to 1945 (Ruffo, 1967), had the opportunity to see the relief maps displayed in the Geology and Palaeontology Museum of the university, and to understand their potential in terms of educational purposes and dissemination of geological knowledge. The Regional Museum of Natural Science in Torino houses today the same models.

Since only 4 terrain models are accompanied by the year of their completion, identifying and dating certain phases of this project was possible thanks to annual reports, private correspondence and some archive documents, in particular those found in the Zorzi and Ruffo's Archive. One of Zorzi's reports dated 1949, for example, describes the stages and the difficulties of the post-conflict reconstruction, providing a list of what he did to setup the new rooms. It also records Strani's donation of terrain models intended for a temporary Geomorphology Room on the first floor of Pompei Palace in Verona, where the Natural History Museum still stands. Therefore, from a chronological perspective, it seems that the project developed over approximately 20 years, from 1945 to 1965, when the museum reopened.

MARIO STRANI AND THE RELIEF MAPS COLLECTION

Mario Strani was born in Verona on 11 July 1907. Very passionate about natural sciences, he started visiting the museum in Verona in when he was a boy. In 1944, he moved to Pinerolo, a little town in northwestern Italy in the province of Torino, where he spent the rest of his life working as a dentist until the year 2000, when he passed away. His interests, skills and creativity led him to the creation of thousands of models of fungi, starting from natural specimens and applying special techniques, which he himself invented, and honed (Ruffo, 2000). Donating his works to the community, he contributed significantly to the cultural life of both

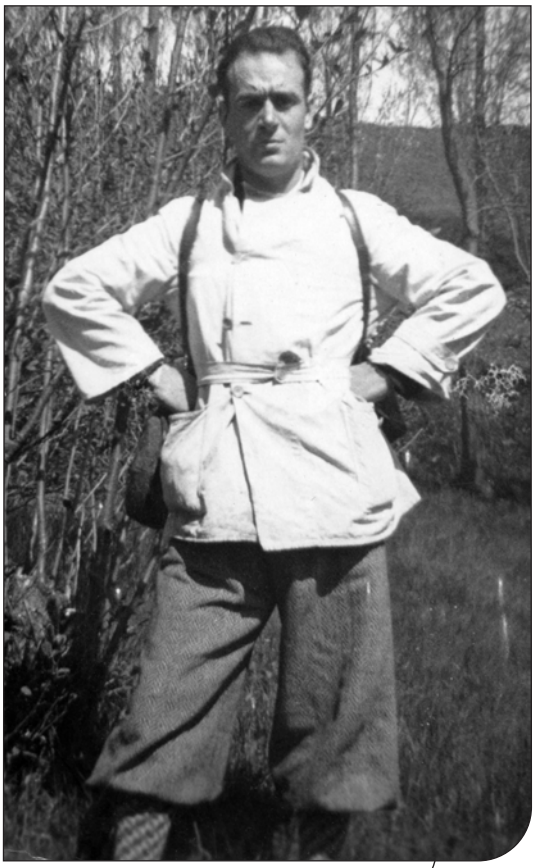

Fig. 1. Mario Strani.

Fig. 2. Fungi models collection.

Verona and Pinerolo. It is precisely in Pinerolo that the Civic Didactic Museum of Natural Sciences (see website n. 2), located in Villa Prever since 2013, was named after him in 2007 (fig. 1). The Museum still displays Strani's rich mycology collection, whose 3000 fungi models are invaluable in terms of originality and educational importance. The Museum of Verona also holds one of his mycology collections: it includes 330 fungi models, 240 of which on display until 2002, that represent 230 different species (fig. 2). This collection was created between 1960 and 1964.

The realization of the geological models is the result of different passions and skills. Mario Strani's creativity and precision contributed in the building of three-dimensional plaster topographic models. Angelo Pasa, project coordinator, contributed with his geological and geomorphological competence: he analyzed and simplified geological data regarding the stratigraphic successions of the different areas reproduced on the relief models. Strani's uncle, the painter Renato Bonetto (1897-?) from Verona, added the graphic contribution and completed the project with tempera painting and India ink for writings and hand-painted final touches (fig. 3). Renato Bonetto also dealt with explanatory panels, keys and geological schemes, all painted on wood that accompany the relief maps. As cartographic reference, in addition to the Geological Map of Italy and the Geological Map of Tre Venezie (the historical region in the north-east of Italy), both at the scale of 1:100,000, Pasa also used personal comments and observations that might have had an influence on the choice of which areas were worth reproducing. Originally, 13 of the terrain models were on display in the Stratigraphy Room, while four were in the Petrography Room. However, the

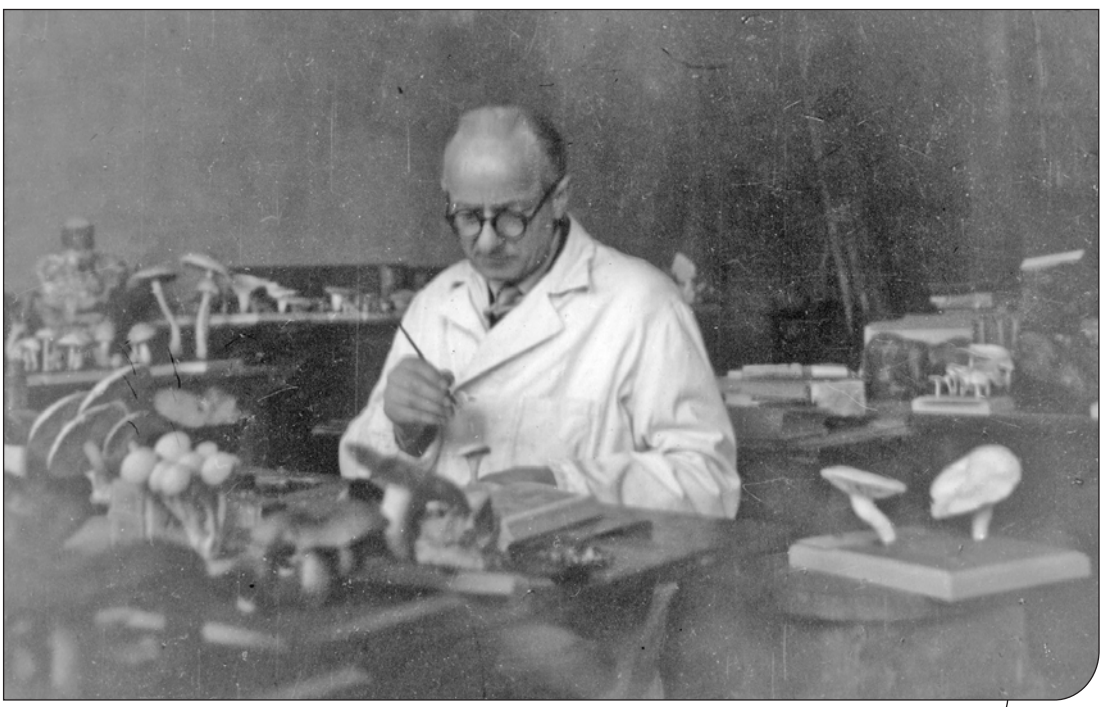

Fig. 3. Renato Bonetto, the painter, at work.

Fig. 4. Room 12: Millions of years ago. Geological plastic models are displayed in the centre of the Room.

Petrography Room was dismantled at the end of the '90s, thus all 17 of them are now on display in the same Room, so as to replicate almost completely the original exhibition design of 1965 (figs 4-5). They are all hand-painted plaster models and reproduce at various scales the geology and geomorphology of different Italian regions, thus enabling visitors the air-view of the whole country. From the big model reproducing Italy (fig. 6), it is possible to move towards more detailed representations of northern Italian areas, such as the province of Verona and Garda Lake (fig. 7), following an ideal path from east to west, Then, from the Colli Euganei in the region of Veneto, passing through the Dolomites and the Val di Fassa in the province of Trento, the Grigne group in Lombardia and the Susa and Chisone valleys in Piemonte, one eventually arrives at Albenga, a little town on the Gulf of Genova in Liguria. Visitors have thus the opportunity to explore from an above perspective the most important and impressive mountain groups in the Alps (Monte Bianco, Monviso, Monte Cervino, and Monte Rosa), and in the southern region of Puglia, especially in the Gargano area. Special attention is dedicated to volcanism in the southern regions of the country. Visitors can observe the model of the Mount Etna (in the Minerals Room), the Mount Vesuvio on the Gulf of Napoli and the volcanic island of Ischia (tab. 1).

In addition to the displayed relief maps, the collection includes 133 works: since some of them are not completely painted, they are stored in the museum's depot. These plaster models (90 negatives

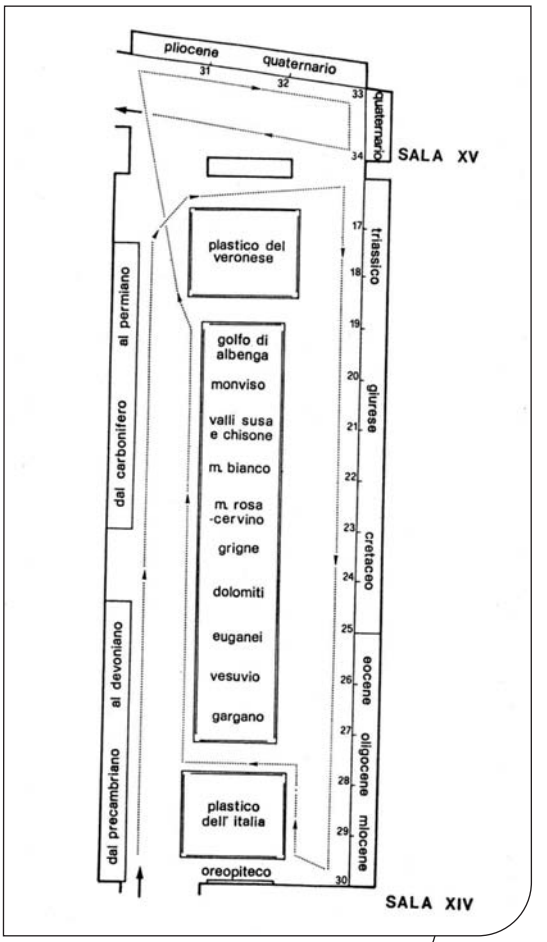

Fig. 5. Schematic overview of Room 12 exhibition design in Verona Museum.

N°	SUBJET	AGE	SCALE	DESCRIPTION	MEASURE cm (lenght.xwidth.xh.)
1	TERRITORIO VERONESE E LAGO DI GARDA	1945-ante 1965	1:25,000, equidistance isohypses 20 m	On the topographic base maps I.G.M. at the scale of 1:25,000 and geologic maps of the Geological Map of Italy 1:100,000. The model is equipped with a mobile tablet for consultation, with the legend of colors and symbols	300x271x4-15, divided into 56 elements of the measure 39x37.5x4-15
2	GOLFO DI ALBENGA	1945-ante 1965	1:25,000, equidistance isohypses 20 m	On the topographic base maps I.G.M. at the scale of 1:25,000 and geologic maps of the Geological Map of Italy 1:100,000. (S. Franchi, V. Novarese, D. Zaccagna)	150x120x10-18, composed of 2 elements of the measure 75x120x10-18
3	GRUPPO DEL MONVISO	1945-ante 1965	1:25,000, equidistance isohypses 20 m	On the topographic base maps I.G.M. at the scale of 1:25,000 and geologic maps of the Geological Map of Italy 1:100,000 (S. Franchi, A. Stella) and french glacial geology maps (F. Sacco) and unpublished work by A. Pasa	114x162x10-25, composed of 2 elements of the measure 114x80-82x10-25
4	VALLI DI SUSA E CHISONE	1945-ante 1965	1:50,000, equidistance isohypses 25 m	On the topographic base maps I.G.M. at the scale of 1:50,000 and geologic maps of the Geological Map of Italy 1:100,000 (E. Mattirolo, V. Novarese, S. Franchi, D. Zaccagna), Geological Map of Savoia (L. Moret), glacial geology maps (P.L. Prever) and unpublished work of A. Pasa	78x162x10-15, only element
5	GRUPPO DEL MONTE BIANCO	1945-ante 1965	1:50,000, equidistance isohypses 25 m	On the topographic base maps T.C.I. at the scale of 1:50,000 and geologic maps of the Geological Map of Italy 1:100,000 (V. Novarese, S. Franchi), Geological Map of Savoia (L. Moret)	71x71x10-15, only item, a copy is kept in storage
6	GRUPPO MONTE ROSA-CERVINO	1945-ante 1965	1:50,000, equidistance isohypses 25 m	On the topographic base maps T.C.I. at the scale of 1:50,000 and geologic maps of the Geological Map of Italy 1:100,000 (V. Novarese, S. Franchi), Geological Map of Switzerland 1:500,000 updating	50x75x15, only item, a copy is kept in storage
7	GEOLOGIA DELLE GRIGNE	1945-ante 1965	1:20,000, equidistance isohypses 10 m	On the topographic base maps T.C.I. and topographic base maps I.G.M. at the scale of 1:25,000 adapted by Mario Strani and field geology of Philippi, Taramelli, Mariani, Redini, Nangeroni, De Sitter, ecc.	114x70x8-15, only element
8	DOLOMITI DI FASSA	1945-ante 1965	1:25,000, equidistance isohypses 20 m	On the topographic base maps I.G.M. at the scale of 1:25,000 and geologic maps of the Geological Map of Italy 1:100,000 (field geology of B. Castiglioni, M. Cornelius Furlani, P. Leonardi, S. Vardabasso)	157x114x18-20, composed of 2 elements of the measure 78x114x18-20
9	DOLOMITI DI CORTINA	1945-ante 1965	1:50,000, equidistance isohypses 25 m	On the topographic base maps T.C.I. at the scale of 1:50,000 of the touristic area and geologic maps of the Geological Map of Tre Venezie 1:100,000 (B. Castiglioni, B. Leonardi, G. Merla, L. Trevisan, S. Zenari)	78x59x10, only element, a copy is kept in storage
10	COLLI EUGANEI	1962	1:25,000, equidistance isohypses 25 m	On the topographic base maps I.G.M. at the scale of 1:25,000 and geologic maps of the Geological Map of Tre Venezie 1:100,000	119x100.5x9.5, only element, a copy is kept in storage
11	GOLFO DI NAPOLI	1952	1:50,000, equidistance isohypses 25 m	On the topographic base maps T.C.I. at the scale of 1:50,000 and I.G.M., geologic maps of the Geological Map of Italy 1:100,000 with updating	162x90x10.5, only item, a copy is kept in storage
12	IL GARGANO	1945-ante 1965	1:100,000, equidistance isohypses 50 m	On the topographic base maps I.G.M. at the scale of 1:100,000 and geologic maps of M. Casetti, G. Checchia Rispoli, E. Cortese, A. Pasa, F. Sacco	106x128x7, only element
13	ISOLA D'ISCHIA	1951	1:10,000, equidistance isohypses 5 m	On the topographic base maps I.G.M. 1890- 1907 and geologic map 1:10,000 of A. Rittman 1927-1928 updating 1951	113x84x8-20, only element, a copy is kept in storage

14	LA GEOLOGIA DELL'ETNA	1945-ante 1965	1:33,000, equidistance isohypses 25 m	On the topographic base maps I.G.M. at the scale of 1: 25,000 (ed. 1932, adapted by Strani) and geologic maps of the Geological Map of Italy 1:100,000 (E. Cortese, L. Mazzetti, R. Travaglia, Waiterhausen)	200x175x12-15, composed of 2 elements of the measure 85x175x12-15 and 115x175x12-15
15	PALERMO	1945-ante 1965	1:100,000	On the topographic base maps I.G.M. at the scale of 1: 25,000 (ed. 1932, adapted by Strani) and geologic maps of the Geological Map of Italy 1:100,000 (E. Cortese, L. Mazzetti, R. Travaglia, Waiterhausen)	77.5x51x4, only element
16	GRAN SASSO	1945-ante 1965	1:100,000	On the topographic base maps I.G.M. at the scale of 1:100,000, only topography and hydrography	51x80x4.5, only element
17	GEOLOGIA DELL'ITALIA	1958	1:500,000	On the topographic base maps T.C.I with adaptations from various maps. Bathymetry according to the map of the Italian Navy, updated to 1940. Geological coordination and update of A. Pasa and geologic maps of the Geological Map of Italy 1:100,000 and other geologic maps for the part beyond the boundaries. The model is equipped with two mobile tablets for consultation, with the legend of colors and symbols	300x265x8, composed of 6 elements, 3 for the northern part, with measures 100x151x8 and 3 for the southern part, with measures 100x151x8

Tab. 1. Geological relief maps displayed in the Civic Museum of Natural History in Verona (authors: Mario Strani, Angelo Pasa, Renato Bonetto).

and 29 positives) show the realization process of the whole collection, and they mainly belong to the big model of the geographical region surrounding the province of Verona. Although the geographical location they reproduce is sometimes uncertain, these models are a precious element to understand the original technique used by Strani, since there is no evidence of the method he used in the Archive's documentation.

Among the 14 finished and painted works, some are copies of the displayed models (Island of Ischia, Colli Euganei, Gulf of Napoli, Cortina in the Dolomites, Monte Bianco), while others are true originals (Geology of Adamello, Island of Stromboli (fig. 8), Island of Capri (tab. 2).

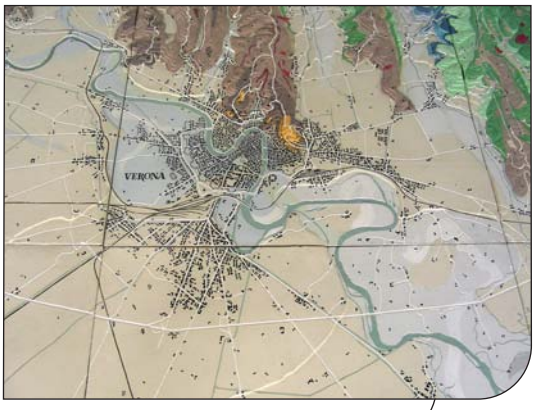

Fig. 7. Geological model of Verona area: detail of the town of Verona.

CONSTRUCTION TECHNIQUE

Apart from the content of the museum labels describing what is on display, there is no further documentation related to the original technique used for the construction of these relief maps. The collaboration with the Pinerolo Naturalist Association, however, turned out to be precious in the process of retracing and describing the method used to build the models, since it helped significantly in gathering experiences and recollections from friends and collaborators. Today, his work is held in the Civic Didactic Museum of Natural Sciences "Mario Strani" in Pinerolo, where visitors can also enjoy other nine terrain models (tab. 3).

Fig. 6. Geological model of Italy.

The technique applied by Strani consisted in the construction of an initial model, using a malleable and perishable material to create a negative, and consequently transfer it to a durable plaster positive (fig. 9). Using a topographic map at the appropriate

Fig. 8. Island of Stromboli.

scale as starting point, he traced the isohypses of reliefs and copied them on cardboard or other similar material sheets. He then piled up these sheets until reaching the right elevation. With time, Strani refined his method, making and using 2 cm layers of plaster instead of cardboard and shaping them with a jigsaw; the definition of isohypses obtained by this technique was much more accurate than the previous one. He made the negative model by filling the master model with a separating agent and with jute strips to strengthen its structure. By using the mould thus created, it was possible to build several

N°	SUBJET	AGE	SCALE	DESCRIPTION	MEASURE cm (lenght.xwidth.xh.)
18	ISOLA DI STROMBOLI	1945-ante 1965	1:5,000, equidistance isohypses 5 m	On the topographic base maps I.G.M. at the scale of 1:10,000 of the 1938, adapted by Strani, geologic maps at the scale of 1:10,000 of Mario Magnani	96x105x7-20, only element
19	GRUPPO DELL'ADAMELLO	1945-ante 1965	1:50,000, equidistance isohypses 25 m	Geologic	115x280x15-20, composed of 2 elements of the measure 115x120x15-20 and 115x160x15-20
20	VAL D'AOSTA CONFINE LYSKAMM OCC.	1945-ante 1965	1:50,000, equidistance isohypses 25 m	Geologic	86x78x20-30, only element
21	ISOLA DI CAPRI	1945-ante 1965	1:10,000	Topographic	51x78x10, only element
22	FRONTE GHIACCIAIO LYS	1945-ante 1965	1:50,000	Geomorphological	38x46x12-22, only element
23	TERRAZZI FIUME TANARO (BASTIA-MONDOVI')	1945-ante 1965	1:25,000	Geomorphological	84x84x10, only element
OTHER RELIEF MAPS					
24	TORINO ED I PRIMI CONTRAFFORTI DELLE ALPI COZIE	N.D.	1:25,000	Only topography by unknown author	78x160x18, only element
25	COLLI EUGANEI	First half of the '900	1:25,000, altimetry 1:10,000	*"Rilievo geologico modellato e costrutto da Giuseppe Stegagno in base ai lavori di Edoardo Reyer".* Author: Giuseppe Stegagno	110x85x10, only framed element
26	VERONA (territorio di)	N.D.	N.D.	Geologic	45x43x5

Tab. 2. The relief maps stored in Verona Museum's depot (authors: Mario Strani, Angelo Pasa, Renato Bonetto).

N°	SUBJET	AGE	SCALE	DESCRIPTION	MEASURE cm (lenght.xwidth.xh.)
1	ISOLA DI STROMBOLI	1945-ante 1965	1:5,000, equidistance isohypses 5 m	On the topographic base maps I.G.M. at the scale of 1:10,000 of the 1938, adapted by Strani, geologic maps at the scale of 1:10,000 by Mario Magnani	96x105x7-20, only element
2	ROCCA DI CAVOUR	1980		Original cardboard. Last models created by Mario Strani (perhaps the only existing only in Pinerolo)	64x95x20,only element
3	GRUPPO DEL MONTE BIANCO	1970		Geomorphological	70x70x16, only element
4	GHIACCIAIO DEL LYS	1970		Geomorphological	70x80x35, only element
5	MEANDRI DEL TANARO	1980		Geomorphological	80x80x10, only element
6	STROMBOLI	1970		Geologic	105x95x30, only element
7	GRUPPO DEL MONVISO	1970		Geologic	110x160x25, only element
8	VAL DI SUSA	1970		Geologic	80x169x17, only element
9	VALLI SUSA, CHISONE E GERMANASCA	1970	1:200,000	Geomorphological	73x158x13, only element
10	DOLOMITI DI FASSA	1970		Not colored plastic donated to Young Mountain Association - Pinerolo Section	

Tab. 3. The relief maps of the Civic Didactic Museum of Natural Sciences "Mario Strani" of Pinerolo (To) (authors: Mario Strani, Renato Bonetto).

positives and proceed with the plastering stage - to reproduce the slope morphology - and the final geological or landscape coloring.

DISCUSSION

The art of relief maps in Italy reached its peak between the end of the 19th century and the beginning of the 20th century. During this period, model making became crucial for strategic military purposes. In the same context of the project that led to the production of the Geological Map of Italy, the Italian Military Geographic Institute (IGM) and the Geological Survey of Italy (now ISPRA) created several terrain models in order to represent strategic economic and industrial areas (mining sites) on one side, and geological sensitive areas (volcanic risk) on the other one (D'Andrea, 2012). It is worth mentioning the contribution of Domenico Locchi and Amedeo Aureli, who produced several relief maps for the Italian Royal Geological Office - still held at ISPRA. They have been recently illustrated and published in Fulloni's catalogue (Fulloni, 2012). Afterwards, many museums and universities decided to get their own copy or to commission original subjects. These institutions include the Museum in Torino, the Capellini Museum in Bologna (Sarti, 2007), and the Gemma in Modena, the University of

Fig. 9. Plaster models, negative and positive of one element.

Padova and the Vesuvius Observatory. The workshop on the plastic representation of the territory was useful to estimate the value of these assets. These works are intermediate between art and science. It was also helpful in order to understand how surprisingly widespread these works of art reproducing scientific contents are (D'Andrea, 2013).

After ISPRA cataloguing and study of these assets and in spite of their correlation with Earth Sciences, it has been acknowledged that the models belong to the historical and artistic Italian heritage. Therefore, the most appropriate cataloguing category is Art Object (AO), as indicated by the Italian Central Institute for Cataloguing and Documentation (ICCD) (Fulloni, 2012). Our participation in the workshop led to the realization of a brief self-produced video (see website n. 3) to enhance the models' visual impact on visitors. From the scientific and educational points of view, the geological value of these works of art cannot be denied, although new digital technologies gain the upper hand and make these models look anachronistic and static for a modern exhibition. Indeed these terrain models cannot compare to the modern 3-D representations, which are the result of the introduction of sophisticated digital tools able to simulate the entire geological process. However, the digitalization of displayed models may also have negative outcomes, turn into an economic and technical issue for the museum – digital technologies, for example, need to be constantly supervised by specialized staff, rarely available in an Italian museum.

ACKNOWLEDGEMENTS

We are grateful to all colleagues in the Museum of Verona, in particular: Bruna Burato and Lucia Petri from the Library, for all the archive research; Lorenzo Don and Marco Rolandi for the original video production; Francesco Di Carlo from the Botanic Section and Roberta Salmaso from the Zoology Section for the information about the fungi models collection. We are grateful to Strani's family and Associazione Naturalistica Pinerolese for the useful collaboration too.

English translation by Eleonora Salzani.

REFERENCES

AA.VV, s.d. *Guida didattica del Museo ad uso degli insegnanti della scuola elementare e media*. Museo Civico di Storia Naturale di Verona. Cassa di risparmio di Verona Vicenza e Belluno, 59 pp.

D'ANDREA M., 2012. *Le Collezioni Geologiche e Storiche dell'ISPRA: la Collezione dei plastici storici del Regio Ufficio Geologico, Introduzione*. In: Fulloni S. (ed.): I plastici storici del Servizio Geologico d'Italia - Catalogo, ISPRA/Cataloghi, Roma, pp. III-IV.

D'ANDREA M., 2013. La rappresentazione plastica del territorio tra Ottocento e Novecento. *Ideambiente*, *66:* 26-28.

FULLONI S., 2012. *"I plastici storici del Servizio Geologico d'Italia - Catalogo"*. ISPRA /Cataloghi, Roma, 232 pp.

RUFFO S., 1967. Angelo Pasa. *Archivio botanico e bibliografico italiano, XLIII:* 257-264.

RUFFO S., 2000. Mario Strani, versatile ingegno che ha lasciato "segni" al Museo. Articolo del quotidiano *L'Arena*, *9.11.*2000.

RUFFO S., CURI E., 2005. *Il Museo civico di storia naturale di Verona dal 1862 ad oggi*. Marsilio, Venezia, 171 pp.

SARTI C., 2007. *I plastici geologici del Museo "Capellini" (Università di Bologna, Italia) nella storia della geologia*. In: A. Bürgi (ed.), Europa Miniature Il significato culturale dei rilievi plastici, XVI-XXI secolo, Edizioni Neue Zürcher Zeitung, Zurigo, pp. 127-146.

Website (accessed 01.03.2016)

1) Civic Museum of Natural History of Verona website
http://museodistorianaturale.comune.verona.it/

2) Civic Didactic Museum of Natural Sciences "Mario Strani"
www.museomariostrani.com

3) Mario Strani's terrain models at Verona Museum (2013)
https://www.youtube.com/watch?v=JfHQyLq108E

Submitted: December 20th, 2016 - Accepted: October 9th, 2017
Published: December 18th, 2017