

# NATURAL RESOURCES AND COASTAL PRODUCTIVE SETTLEMENTS IN SOUTHERN PUGLIA

Patrizia Tartara

CNR-IASI, Lab. Sistemi Informativi Territoriali per i Beni Culturali del territorio italiano,  
p.le Aldo Moro 7 – 00185 Roma (Italy),  
e-mail: [patrizia.tartara@cnr.it](mailto:patrizia.tartara@cnr.it), phone +39 06-49937505

**Abstract** – The systematic topographic research conducted for many years by the CNR and by the Ancient Topography Laboratory of the University of Salento in Puglia, in particular in the Salento peninsula and in the Tavoliere, have led to an exponential increase in the knowledge of archaeological evidence and consequently to the analysis and reconstruction of the evolution of human settlement in the territory in the different phases, from prehistoric times to the medieval phase. The data collected with a detailed survey and the use of various traditional and advanced technologies are collected in the "Territorial Information System of Cultural Heritage of the Italian territory" of the CNR. The systematic analysis also involved the coastal strip, both Adriatic and Ionian; both have an uninterrupted sequence of settlements, often with a continuity of life from the Ancient Bronze Age to the Modern Age. During the second millennium BC there is a continuous chain of large settlements often provided with fortifications, often located on promontories or reliefs in relation to deep inlets or forms of landing of different types. The few cases of regular excavations have revealed large quantities of imported materials, which attest, already in the ancient phases of the Bronze Age, continuous contacts with the Aegean world. The topographical positions of these dominant sites after nearly three millennia will be replicated by the coastal watchtower and defense system. A particular type of settlements of limited size and in the past not identified, deserves particular attention: in different points of the coast there are very consistent heaps of whole and fragmented shells belonging to different species, but mainly of murex (*Phyllonotus trunculus*); heaps, even extensive, of shells are associated with large quantities of ancient ceramic fragments: table and fire pottery, especially amphorae and various materials related to fishing (net weights, nails, bronze sheets, etc.). Evidently they are very simple preparations for the collection of molluscs and the subsequent processing for the production of purple, essentially allocations of *purpurarii*, documented by ancient sources in this sector of the territory. The obtained product, extracting the dye base from a mollusk gland, was then sent to the dry cleaners (*bafii*); that in classical and Roman times they were mainly found in Taranto; still at the end of the third century AD. C. Taranto was the production center of the imperial property purple (NOTITIA DIGNITATUM, Occ. XI, 1: *Procurator bafii Tarentini, Calabriae*). The war events of the following centuries caused the transfer of the *bafii* to Otranto but the production somehow continued until the Middle Ages; Taranto was certainly the site of settlements of *purpurarii* along the coast, then obliterated by modern urbanization; in the historical cartography an heaps of shells located on the coast of the Mar Piccolo is documented, however, still clearly visible at the end of the last century, known by the local toponym of "Monte dei Coccioi", attestation of a collection site, probably connected to the purple that various ancient sources place in this sector of the city. from the mollusk. The chronological span of the settlements recorded so far is very broad, but varies

greatly as a result of the situation of the various sites; at last , it is possible to rely only on what is visible on the surface; mainly the materials show continuity of use of the sites from the late archaic and classical age to the late imperial age, but in at least two of the surveyed settlements the presence of Bronze Age materials is documented, always associated with murex shells and other ancient ceramic fragments of different chronology. In some cases, remains of masonry tanks with cocciopesto hydraulic coating are preserved, evidently functional to the processing of the product. The settlements detected in all cases develop in situations of small pools, always associated with the presence of fresh water, small streams, springs, including underwater springs, small lagoons; evidently the contribution of fresh water in the sea creates favorable conditions for the proliferation of molluscs and therefore favors the quantity and quality of the kept. The settlements identified to date are all on the Ionian coast, where there are many springs and wetlands. The only presence of mounds of murexes in the Adriatic is for now that of Coppa Nevigata (FG), however, dated to different phases of the Bronze Age. The study - and the protection - of the identified sites and the increase in research is important because they affect the coastal strip which is particularly at risk for seaside tourism and uncontrolled urbanization.

## **Introduction**

The “Sistema Informativo Territoriale per i Beni Culturali (SIT) del territorio italiano”, or “GIS for Cultural Heritage” (Fig. 1), has been realized by researchers at CNR and at the University of Salento. The aim is to support the research, protection, and management of cultural heritage. As a focus, it uses geographical positioned information for knowledge, preservation and to increase the value of the territorial cultural heritage. It is a very valuable and useful tool for gathering, updating, processing and consulting all available Cultural Heritage and Environmental Data from surveys, aerial monitoring, research, finalized cartography, bibliographical and archival materials.

## **Methods**

Research developed by the Laboratory of Territorial Information Systems for Cultural Heritage (GIS) at the National Research Council (CNR) are addressed to the issues of systematic archaeological survey (to create a cadastre of the archaeological heritage) and increase in of the heritage of assets cultural properties of the national territory, in the research lines of archaeological topography, with the use of available technologies, traditional and advanced, for the identification, the documentation and evidence management; not least a correct planning of the territory.

A wide-ranging topographical analysis of archaeological areas at risk in the national territory of Italy is currently being conducted. This activity is linked to systematic aerial and terrestrial monitoring and has been developed by the author of this paper as well as Marcello Guaitoli<sup>1</sup> and conducted in collaboration with the Carabinieri Helicopter Groups of Pratica

---

<sup>1</sup> Ordinary Professor of Ancient Topography at University of Salento, that I thank for kindly lent me all the photographs.

di Mare and of Bari, which are coordinated by the Nucleo Tutela Patrimonio Culturale dell'Arma dei Carabinieri since 1997.

In the last thirty years, I had the opportunity to control the territory of southern Puglia thanks to the survey seminars conducted for the Institute of Ancient Topography of the Cultural Heritage Department-University of Salento, for graduate and post-graduate courses.

During the monitoring survey on the coastal land of southern Puglia, it has been possible to localize much archaeological evidence, several different kinds of coves for docking, settlements, humid areas, as well as with other colleagues following the research of the final works of academics about this subject.

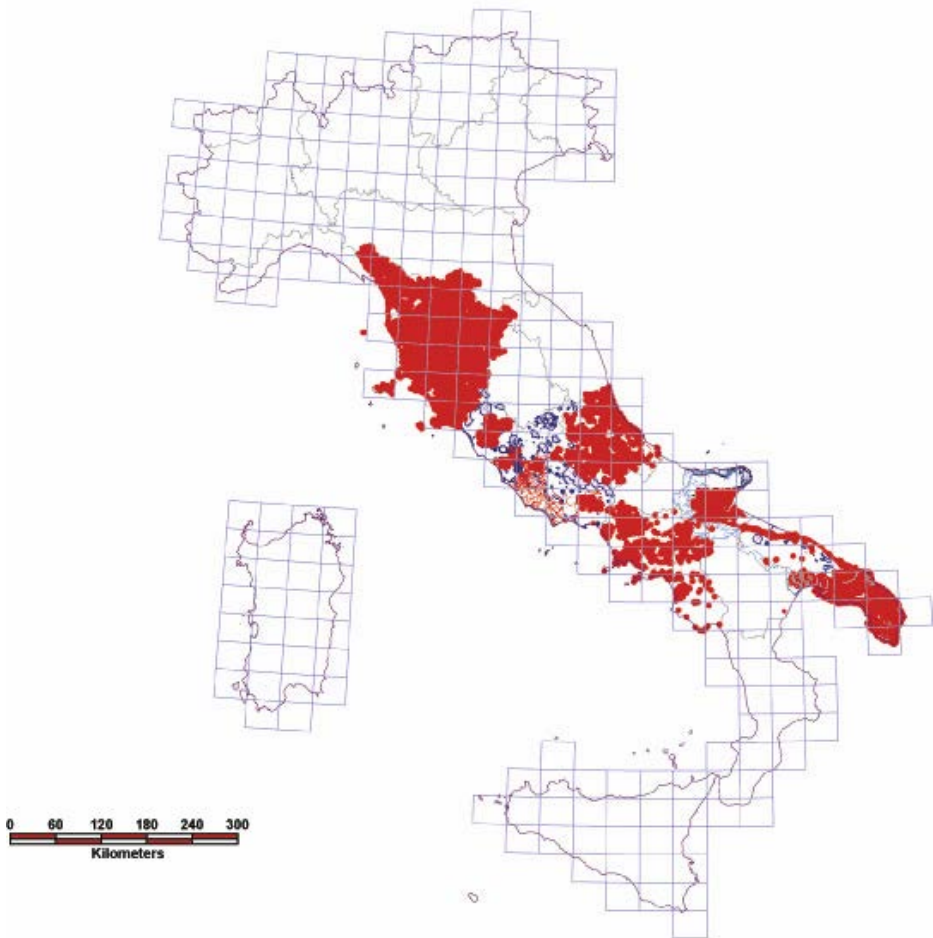


Figure 1 – Territorial Information System for Cultural Heritage (SIT BC) of the Italian territory.

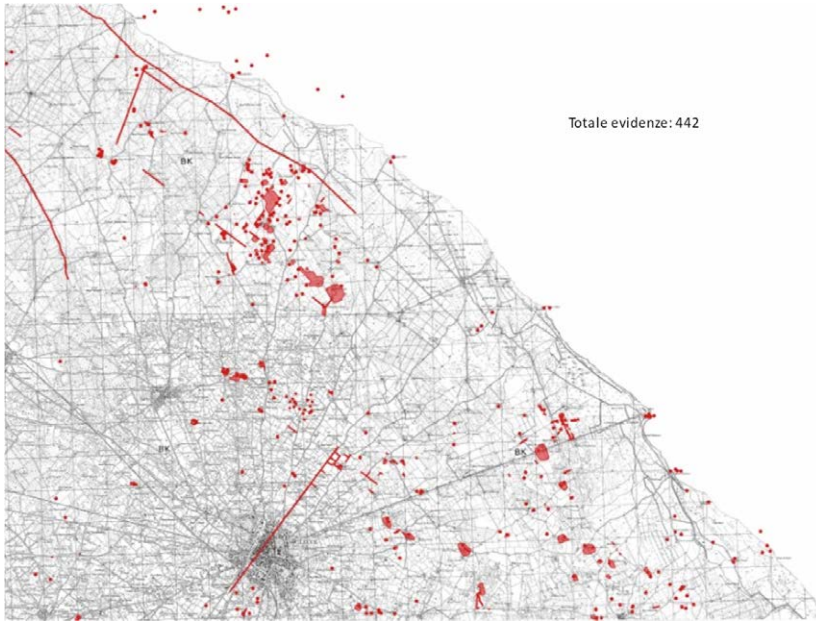


Figure 2 – Example of evidence exactly measured during the survey and restituted on map.

## Results

Here will be shown only some identified settlements or areas of pottery fragments, essentially dated in the Bronze Age, sometime with fragments belonged even to the Iron Age, some others are Messapian, others are dated in Roman Age; some of them have soft water springs into the sea, near the seashore, or close to river.

Apart from some few ports of cities facing the coast as Egnatia, Brindisi, Otranto, Gallipoli, Taranto, many small settlements, and site of work related to fishing are present along the southern coast of Puglia. Some of the settlement facing the sea, had on their background wide humid areas, in some cases still existing or well visible on aerial photographs, both historical and recent. Humid areas were depicted even by the Arab cartographer Al Idrisi (nearly 1154) (Fig. 3), which could see them from the sea and had understood as wide long rivers and as such represented on his map<sup>2</sup>.

<sup>2</sup> M. AMARI, C. SCHIAPARELLI, *L'Italia descritta nel Libro di Re Ruggero, compilato da Edrisi*, «MemLinc», s. II, VIII, 1876-77 (1883), p. 102 sgg.; cfr. R.A. SKELTON, *Meister der Kartographie*, Berlin 1963, p.74, 317, 355, tav. XXX; R. RUBINACCI, *La data della geografia di al Idrisi*, «Studi magrebini» III, 1970, p. 73 sgg.; K. MILLER, *Mappae Arabicae*, Stuttgart 1926-1931; IDEM, *Mappae Mundi. Die ältesten Weltkarten*, Stuttgart 1895-1898; D. WOODWORDS, *Medieval Mappaemundi*, in HARLEY-WOODWORDS, *History of Cartography*, Chicago London 1987, p. 286 sgg. The work of Idrīsī, formed in Cordoba, then active in Africa and Asia Minor, was carried out in Palermo under the Norman Roger II, who commissioned the Arab geographer to collect all the information for a geographical description of the world, written in a manuscript in Arabic and Latin language, accompanied by a general map and 70 partial maps: the so-called Book of King Roger (or "Delight for the visit of the countries of the earth").

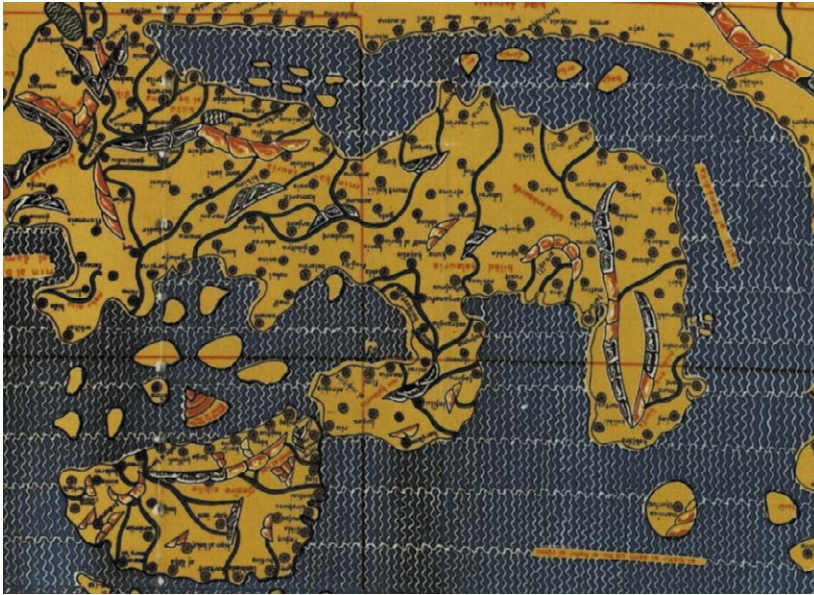


Figure 3 – Part of Idrisi maps. The map it is now shown with modern orientation (North side). Names are in reverse because in earlier times cartography was oriented South.

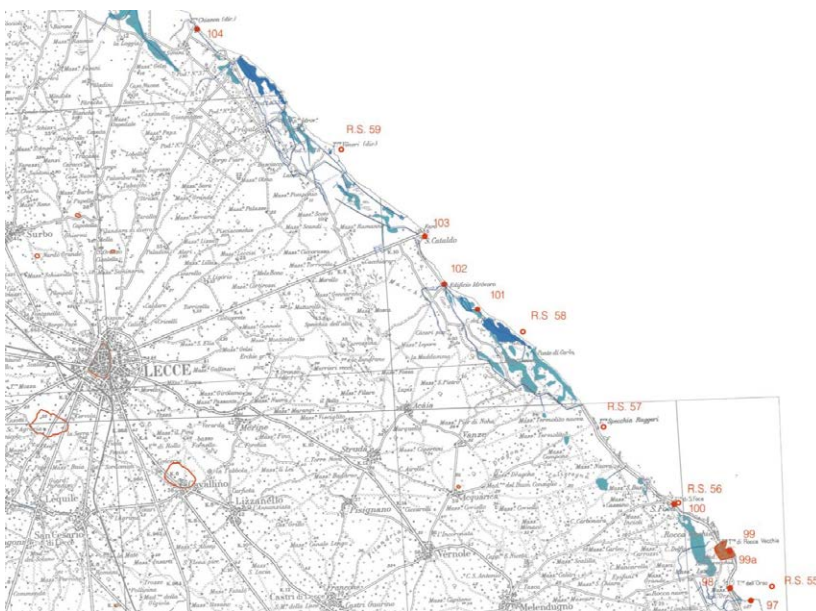


Figure 4 – An example of humid areas on SIT cartography: in dark blue the humid areas today, in light blue the humid areas from traces read on aerial photo (historical and recent) on maps and by survey.



Figure 5 – The humid area “Le Cesine”, south of Lecce.



Figure 6 – Torre Guaceto.

Some of this site, because of their good exposition for sea control, have been later occupied by a long series of watchtowers.

**Torre Guaceto** is a fortified settlement (Bronze Age pottery fragments are on the site of the tower and on one of the other close little islands - Fig. 6) is on a tongue of land facing the sea and a bay, protected by the wide and now well known humid area all around.

Next is the settlement of **Torre Testa**, on a small tongue of land into the sea. On the whole surface of the site there are pottery fragments dated to Bronze Age. The modern road “*litoranea*” and the recent channel cut part of it.

Prehistoric material and small Bronze Age pottery fragments come from the edge of the cliff, strongly collapsed, visible along the coast of **Sant’Andrea**.

Just rather close, the prehistoric and medieval settlement of **Rocavecchia** (Melendugno, Lecce) (Fig. 7), site that plunges into the sea on a high cliff, which on the side facing the open sea is partly eroded and partly cut by various quarry sectors for extraction of blocks. The important site dated to the Bronze Age has fortunately been preserved by the medieval site overlapped it. Numerous excavation campaigns carried out by the University of Salento brought out a great portion of it and of the defensive line of *aggere* on the internal side. By the excavations It has been attacked and burned three times.

As well as the oldest settlement, even the medieval one, larger, had at least two successive lines of fortified walls; on the southern border is visible part of a third one. On the north-western side are visible traces of previous fortified lines (Fig. 8).

From the Bronze Age area of excavations comes a great number of potteries, most painted, even from Aegean area, to attest kinds of commercial routes and the importance of the site that on the southern coastal edge, facing the oldest site, has the access to a huge cave/sanctuary (actually hidden by the surface of the sea). On the walls of this site, well known as “**Grotta della Poesia**”, being used for centuries, there are thousands of inscriptions on the walls, in several languages (Greek, Messapian, Latin).

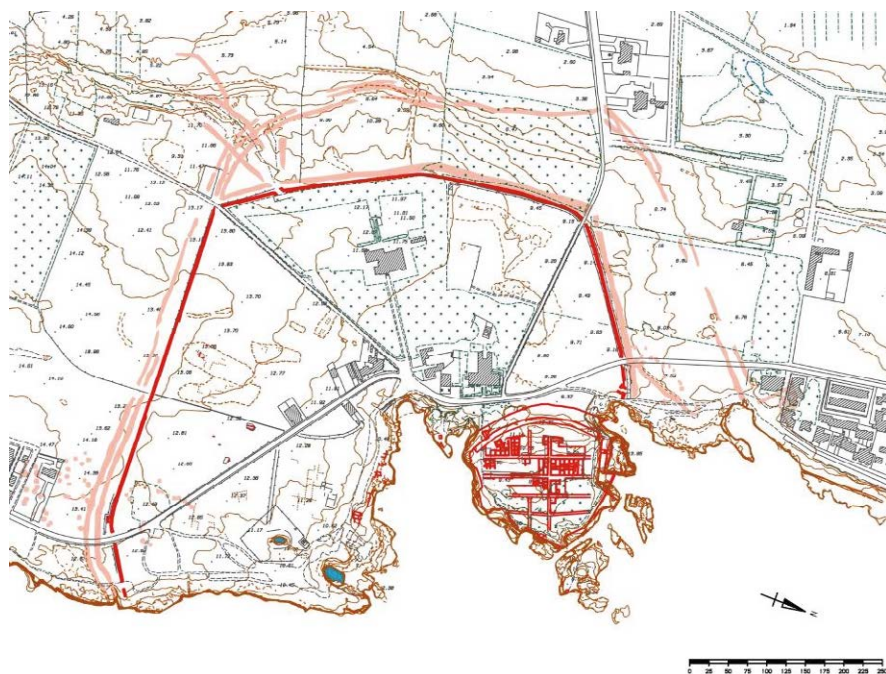


Figure 7 – Rocavecchia: restitution of traces and excavations areas on SIT map.



Figure 8 – Rocavecchia in aerial photo 2006, during a monitoring flight.

A short distance south of Otranto, a Bronze Age settlement (many fragments of pottery have been seen during survey – Fig. 9), on a flat rock platform, dominates the suggestive coast below. A watchtower marks the place (**Torre sant’Emiliano**).



Figure 9 – Torre Sant’Emiliano settlement.





Figure 10 – Porto Miggiano - a short view of the ancient quarry.

A short distance southern, another Bronze Age settlement at **Porto Badisco** is visible by the fragments of pottery and part of the *aggere*. On the nearest inland are known several little caves, some with prehistoric paintings.

Following this last one, there is a very interesting place, called **Porto Miggiano** (Fig. 10), always marked by a watchtower almost completely crashed. On the geological map it is represented by a particular sort of “calcarenite”, similar to that of the whole coast, but with a finer and harder grain. It has represented, since ancient times, an important point of supply for blocks, columns of different size, likely for particular use. Unfortunately, we have not still found where all these materials were employed. By the direct survey seems possible that the carver workers could have organized a loading plan just close to the sea, immediately very deep along the quarry, thus, to allow the draft of the ships.

I omit to talk about the ancient city of **Castro**, with origins at least since the Bronze Age, also mentioned by Virgil, where during the recent excavations (by the University of Salento) of the basement of the temple and a sort of votive deposit, the statue of Athena was found, dedicated in the temple itself. Obvious commercial traffic.

On the Ionian coast of Salento are visible humid areas, as on the Adriatic side, even if in some case has been object of reclamation (for example along the coast of **Ugento**). In the area of **Torre San Giovanni** some aerial photographs I.G.M. 1943 indicate the traces of residual humidity and the coastal lagoon which has now disappeared but is recognizable in the stratification of the dune deposits.

Further along the coast a wide sea inlet where the land curves inward is marked by **Torre Pizzo** (Fig. 11) where a thick expanse of shells of “murices”, fragments of pottery (from Bronze Age to Messapian Age), small bronze nails and small round clay weights for fishing nets overlap the land.



Figure 11 – Torre Pizzo.

It is along the coast that have been found several sites with layers of murices, used for the processing of purple. It is attested, even archaeologically, at least from the Classical Age; for the whole Imperial Age there are abundant documents<sup>3</sup>.

Further on some other settlements: the **Quattro Colonne** (Santa Maria al Bagno-LE) with the remains of was a particular kind of tower; close to the right of the site there is a small river for drinking water supply. **Punta Aspide** fragments of pottery dated to Bronze Age and some to Iron Age are visible on the upper surface of the tongue of land lean forward into the sea. **Torre dell'Alto** with a Bronze Age fortified settlement (a fortification wall is visible in aerial photographs, both historical and recent). Forward north along the coastal rock are visible holes for the collection of salt. Then, at **Torre Squillace** only a few shells of Murex (because of a difficult visibility of the terrain) mark the presence of a site for purple process. Carrying on northern wards, **Porto Cesareo** (Fig. 12) with its little islands, the bay and humid areas just behind (now reclaimed), show several ancient settlements: at **Scala di**



Figure 12 – Porto Cesareo area on a map and in a recent aerial photo.

<sup>3</sup> In 507-511 Theodoric apologized for the inconvenience caused to the factories for the processing of the purple of Otranto (*Cassiodorus, Variarum I, 2*). In the text (*Theonius V. S. Theodoricus Rex - a. 507-511*) it is specified that the work involved craftsmen, ship crews, many peasant families "*quid enim agunt tot artifices, tot nautarum catervae, tot familiae rusticorum*"; a *Perscrutatur Hydruntini maris* is in charge of collecting and shipping the dye. The dyeing business was at least partially managed in Brindisi and Taranto by the Jewish community until the 12<sup>th</sup> century.

**Furno** is documented since Early Bronze Age (XVIII-XVII b.C.) to Iron Age during which period it is fortified by an aggere wall; it is also documented a sacred complex in archaic period and port structures of Greek-Roman Age. At **Torre Chianca** an industrial settlement for the processing of purple active between the 1st and 6th centuries. A.D.; probable presence of a furnace for the production of amphorae; E of Torre Chianca is reported the presence of a wreck with marble columns into the sea. On the **Isola dei Conigli** (Rabbits island) levels of Bronze Age and remains of a Roman villa. Probably the emerged area should have been larger, as it seems to appear by the aerial photos. Between two islands is visible a sort of link or channel under the surface of the sea. Further on is **Punta Prosciutto** and the settlement of Bronze Age and Messapian Age; layers of Murex shells are attested. Then **Torre Castiglione** (Fig. 13 a) and the settlement dated at the Bronze Age; natural erosion has brought to light a section of the fortified wall. The red arrow shows a spring of drinking water into the sea. **Torre Ovo** has in blocks (docks ?), now visible under the surface of sea; some of the blocks have Greek letters engraved. Following northwards **Torre Castelluccia** with the settlement dated to the Bronze Age and first Iron Age; visible the embankment of the Acropoli on which some excavations were carried out. Finally, **Saturo** (Fig. 13 b): the coastal promontory between the bays of Porto Pirrone and Porto Saturo; particularly noteworthy is the area of the ancient landing (A), now buried, and the sanctuary close to the water source (B). The recent urbanization has occupied the area of the ancient lagoon.

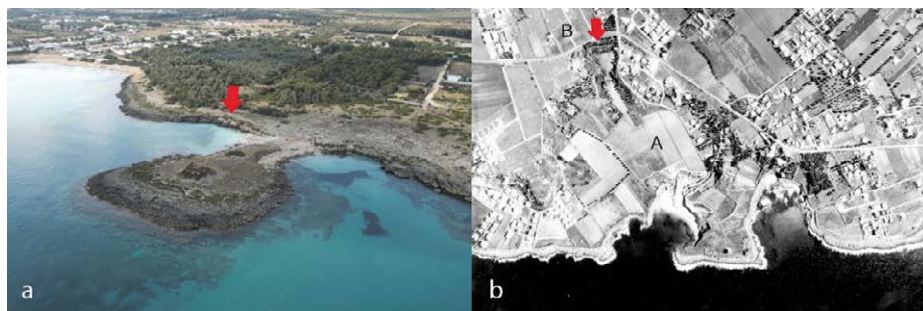


Figure 13 – a) Torre Castiglione. – b) Saturo, photo SARA Nistri 1978.

## Conclusion

The result of the research is rather important for knowledge, but it will also simultaneously be the requisite basis for a correct planning of the territory. It could represent an element of collaboration with the Superintendence responsible for the territory in question and besides it is the result of a shared desire to gather as much information as possible for the reconstruction of an exhaustive historical vision of the territory being studied. That, in turn, will allow the protection at least of that which is known and consequently make possible the improvement and use of those discoveries of greater interest. But the immediate aim of this exhaustive historical vision is to prevent the progressive destruction of what evidence

has been identified. New information has often been acquired in timely fashion, coming from the aerial monitoring performed by the Nucleo TPC and Helicopter Group of Carabinieri / CNR.

## **References**

- [1] AA.VV. (2003) "Lo sguardo di Icaro. Le collezioni dell'Aerofototeca Nazionale per la conoscenza del territorio. A cura di M. Guaitoli. Roma 2003: Campisano editore, pp. 227-239, 305-307, 339-349. ISBN 88-88168-12-5
- [2] Scarano T. (2012) "Roca I – Le fortificazioni della media età del Bronzo – strutture, contesti, materiali", Foggia 2012, Claudio Grenzi editore, EAN 9788884314901