

## **The source of the flint artefacts for the Central Po Plain and Apennine sites, between the 7th and the 2nd millenium BC**

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### **Preface**

The Emilian Plain and the nearby Apennine chain are poor in flint outcrops. That is why people who inhabited this area between the 7th and the 2nd millenium BC, imported flints from different sources, according to the Culture they belonged to.

### **Identification of the flint sources.**

The flint types have been identified on a macroscopic basis. This method has been used to distinguish the Tuscan flints from the Emilian and the Alpine ones. The macroscopic characteristics have not been sufficient to identify the different types of the Alpine flints, whose outcropss are very often variable in colour. Their lithology is also very similar on wide areas.

The cortex condition has been considered very important as well as the natural breaks eventually present on the artifacts. These characteristics allowed the author to identify the sorce where the flints come and, in a few cases also, to recognize if the material had been mined or collected from a soil or from an alluvial deposit.

These dat are of basic importance for the identification of the flint sources, if an area is well known from a geomorphological point of view.

### **The flint outcrops**

The prehistoric sites of the area under study produced tools from five flint sources:

- a) The Tuscan mesozoic formations (BORTOLOTTI, PASSERINI & SAGRI, 1970) located south of the Apennine chain. They are rich in flint nodules and layers, typical in colour and texture.
- b) The Emilian arenaceous and marly Miocene formation (Modino-Cervarola formation), which lie on the high Alpine chain. (REUTTER 1968).
- c) The Ligurian eugeosynclinal sequences which produces evidences of diasper, siliceous limestone and silicious sandstones. Artefacts from these formations are common both to the Tuscan and the Emilian Apennine (ABBATE & SAGRI, 1970).
- d) The Calabrian deposits of the litoral facies in the Emilian Apennine. They are rich in levels of flint rounded pebbles (VEGGIANI 1965).
- e) The Mesozoic Lombard-Venetian series which contain a great variety of good flint nodules, layers and lenses.

### **The Mesolithic flint supply**

The Mesolithic sites from this area are known to belong to the period comprised between the end of the Boreal and the beginning of the Atlantic (7nd - 6th millenia BC). The encampements are distributed on the Appennine passes and in the Plain, in the vicinity of old bed rivers and marshes. Their location might indicate a nomadic economy bases on hunting, fishing and collecting (CREMASCHI & CASTELLETTI 1975; CASTELLETTI, CREMASCHI & NOTINI 1976; BIAGI, CASTELLETTI, CREMASCHI, SALA & TOZZI 1979).

The Tuscan flint is common to the north Tuscan sites (Garfagnana). Its occurence gradually decreases in the encampements of the Emilian ridge of the Apennines.

The Modino- Cervarola flint types are very frequent in the sites

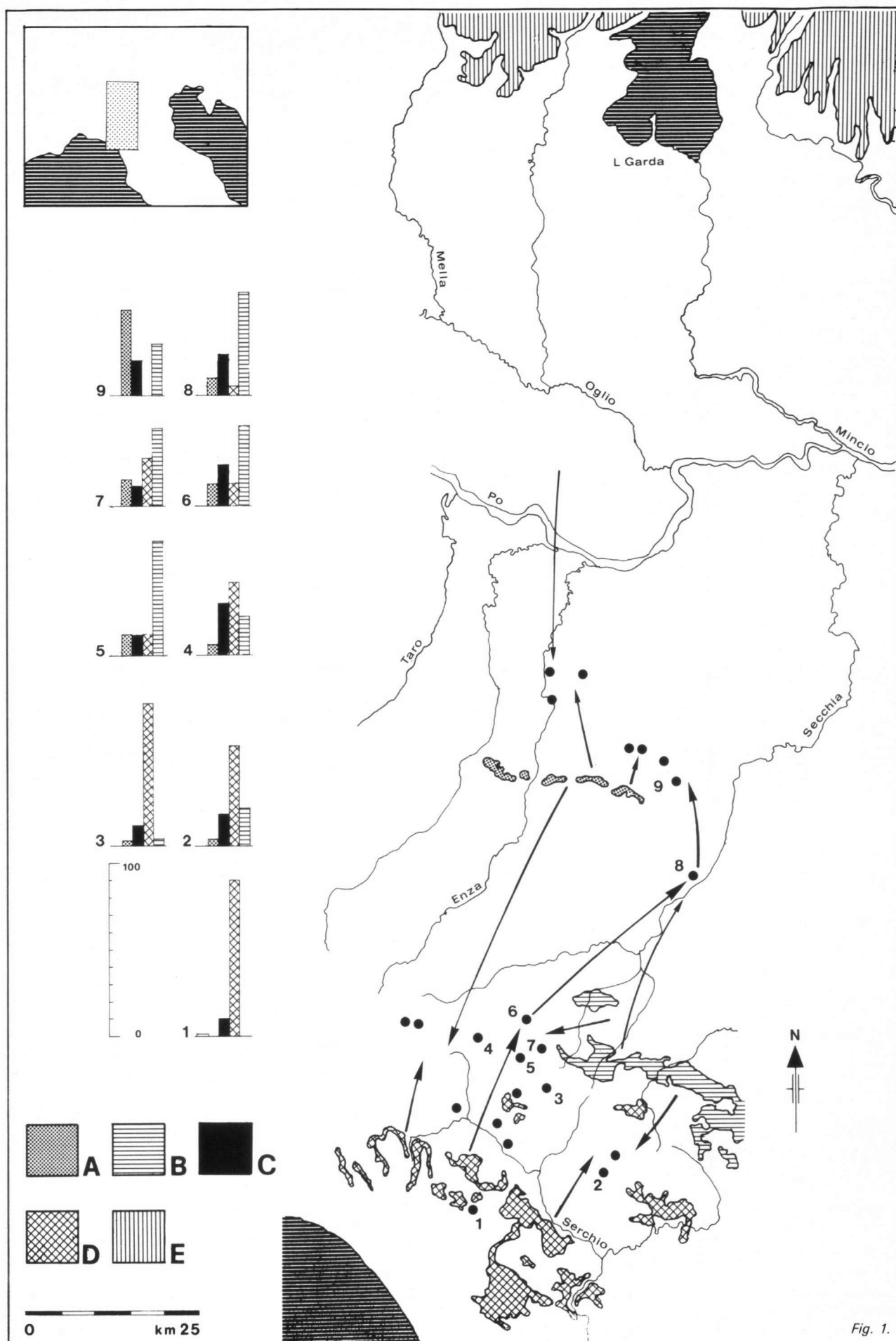
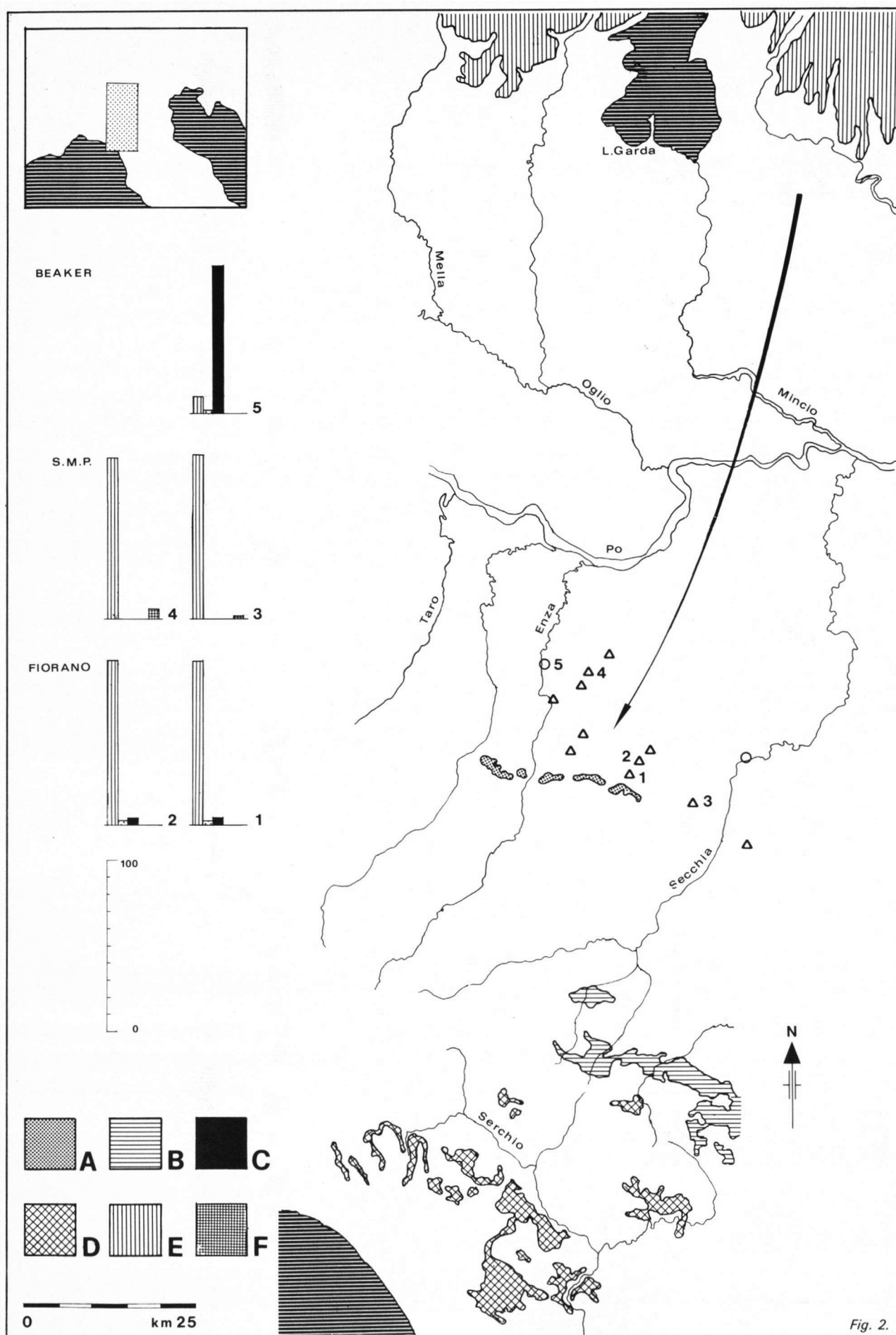


Fig. 1.

Distribution of the sources used by the Mesolithic people A) Tuscan flint. B) Modino Cervarola flint. C) Calabrian litoral flint. D) Ligurian flint and diasper. E) Alpine flint. The istograms indicate the percentage of each type of flint in the

Mesolithic sites. Arrows indicate the flint ways of distribution. 1) Isola Santa, 2) Piazzana, 3) Casoli di Profecchia, 4) Comunella, 5) Lama Lite, 6) Bagioletto, 7) Corni Piccoli, 8) Madonna di Campiano, 9) Alta Pianura Sites.



Distribution of the flint types of the Square Mouthed Pottery and Bell Beaker sites.  
A) Tuscan flint. B) Modino Cervarola flint. C) Calabrian litoral flint.  
D) Ligurian flint and diasper. E) Alpine flint. F) Quarz and obsidian.

The istograms indicate the percentage of each flint type in the Neolithic and Bell Beaker sites.  
The triangles indicate the Neolithic sites. The circles the Bell Beaker ones. 1) Albinea, 2) Rivaltella, 3) Chiozza, 4) Razza di Campegine, 5) S. Ilario.

located on the Apennine ridge whilst are very rare in the settlements of both the Apennine slopes. A few artefacts, made with this type of flint, are also known from the Po Valley sites. On the other hand, the flint types from the lower Apennine outcrops are very common to the Po Plain sites and gradually decrease southwards. A very small percentage of artefacts made from this flint is known on the southern ridge of the Apennine chain.

Alpine flints are very scarce in the Po Plain Emilian sites. This is probably due to the fact that the Po river and the surrounding marshy areas were an obstacle to the communication between the southern and the northern region of the Plain.

#### **The Neolithic flint supply**

Many Neolithic sites of the Fiorano and Square Mouthed Pottery Cultures are known to date (BAGOLINI & BIAGI 1976; CAZZELLA, CREMASCHI, MOSCOLONI & SALA 1976). They are scattered along the terraces of the old beds of the Apennine rivers and streams.

The flints from the sites of this period are almost exclusively of Alpine source. Most of the artefacts and of the cores of the Square Mouthed Pottery Cultures are of big size.

Apennine flints were used by the Fiorano Culture settlers but not by the Square Mouthed Pottery ones. This might indicate that the alpine flint types took place gradually.

Flint nodules rarely come from alluvial deposits or from mines. Most of them are from the pedogenetic weatherings of the calcareous flint outcrops. This is testified by the characteristic corrosion of the nodules cortex.

A few artefacts from Chiozza bear drag lines due to glacier movement. Their colour and texture indicate that they come from the Lessine Hills in the Veneto or from the morainic deposits of the Lake Garda.

#### **The flint supply of the Bell Beaker Culture.**

The Bell Beaker Culture flourished at the beginning of the 2nd millennium BC. (BARFIELD 1975; BARFIELD, CASTELLETTI, CREMASCHI 1976). In the area of study, the Beaker communities used almost exclusively local rocks of poor quality, to chip their artefacts. Alpine flints are extremely rare at all the sites known to date. The chipping technique is very bad, in a few cases similar to that of the Lower Palaeolithic artefacts. Stone instruments are as common as antler and bone ones.

#### **Conclusions**

The study of the cultural periods under examination, indicates that the flint supply was due to the economic strategy of the cultures themselves.

During the Mesolithic, the nomadic economy allowed people to renew their tools, using the different flint sources they found on their way.

On the other hand, the neolithic farmers settled almost exclusively in the plain. Their flint artefacts are normally made from Alpine flint, which is of better quality than the Apennine one.

Flint imports seem to break off with the Bell Beaker Culture. Flint artefacts are replaced by instruments made from other material including metal ones.

#### **REFERENCES**

- ABBATE, E. & SAGRI, M., 1970 - *The eugeosynclinal sequences*. Sediment. Geol., 4.
- BAGOLINI, B. & BIAGI, P., 1976 - *Introduzione al Neolitico dell'Emilia e Romagna*. Atti XIX Riun. Scient. I.I.P.P. Firenze.
- BARFIELD, L.H., 1975 - *Il periodo eneolitico nella provincia di Reggio Emilia*. Preistoria e Protostoria del Reggiano. Reggio Emilia.
- BARFIELD, L.H., CASTELLETTI, L. & CREMASCHI, M., 1976 - *Stanziamiento del vaso campaniforme a Sant'Illario d'Enza (R.E.)*. Preistoria Alpina, 11.
- BIAGI, P., CASTELLETTI, L., CREMASCHI, M., SALA, B. & TOZZI, C., 1979 - *Popolazione e territorio nell'Appennino tosco-emiliano e nel tratto centrale del bacino del Po, tra il IX ed il V millennio a.C.* Emilia preromana (in press).
- BORTOLOTTI, V., PASSERINI, P., SAGRI, M. & SESTINI, M., 1970 - *The miogeosynclinal sequences*. Sediment. Geol., 4, 203.
- BORTOLOTTI, V., PASSERINI, P., SAGRI, M. & SALA, B., 1976 - *Siti Neolitici di Razza di Campegine*. Preistoria Alpina, 12.
- CREMASCHI, M. & CASTELLETTI, L., 1975 - *Deposito mesolitico del Passo della Comunella (Reggio E, Appennino tosco-emiliano)*. Preistoria Alpina 11.
- CREMASCHI, M. & NOTINI, P., 1976 - *L'insediamento mesolitico di Lama Lite sull' Appennino Tosco Emiliano (Reggio Emilia)*. Preistoria Alpina 12.
- REUTTER, K.J., 1968 - *Die tektonischen Einheiten des Nordapennins*. Eclogae Geol. Helv., 61 (1).
- VEGGIANI, A., 1965 - *Transporto di materiale ghiaioso per correnti di riva dall'area marchigiana all'area emiliana durante il Quaternario*. Boll. Soc. Geol. It. 84 (2).

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