NEW HALOS
AND THE HELLENISTIC FORTIFICATIONS OF THE OTHrys
Mountains, Thessaly

Introduction
Since 1976 Prof. Dr. Reinder Reinders of Groningen University, The Netherlands, has directed the research of the Hellenistic city of Halos, situated on the coast of the Pagasitic gulf in Thessaly, Greece (Fig. 1). This is now one of the few cities founded in Hellenistic times to have been closely studied. Many publications of Halos are, however, inaccessible in Turkey. This is unfortunate as Hellenistic cities, irrespective of their precise location, are of obvious interest to Turkish archaeologists. The aim of this article, based largely on the first volume of the final reports (Reinders 1988a), is therefore to provide a summary of the results of the research carried out in and around Halos to date.

Fig. 1: Map of Greece showing the location of Halos (Source: Efstathiou, Malakasioti & Reinders 1991, Fig. 1).

History
New Halos was probably founded in 302 B.C. Architecturally, it was a new city, but politically it was a refoundation on a different site of the long-existing polis Halos.

1 The author has been involved in the Halos-project since 1987. In 1991, while he was guest lecturer at the department of Art History and Archaeology of the Aegean University of Izmir, the Faculty of Arts very generously granted him permission to participate in the excavations conducted at Halos from late May to early July under direction of Prof. Dr. H. Reinder Reinders. Fieldwork was organized and directed by Drs. M. J. Haagsma and Drs. J. J. Hekman. I wish to thank Prof. Dr. H. Reinder Reinders and Drs. M. J. Haagsma for their support and assistance in writing this article.
It is now known that New Halos had at least two predecessors, both on different locations. A few hundred metres from New Halos on the northern bank of the Amphrysos the oldest of the two was found, with sherds indicating occupation from the neolithic (?) and bronze age up to the geometric period, followed by reoccupation in Byzantine times (Efstathiou, Malakasioti & Reinders 1990, 1991). Some Mycenaean and geometric graves as well as one from the early archaic period have been excavated at the Kefalosis spring nearby (Wace & Thompson 1912, 3-8; Efstathiou, Malakasioti & Reinders 1990, 1991). The site of the classical city of Halos is thought to be the Magoula Plationiki. This mound lies on a sand-spit on the coast of the Pagasitic Gulf, about 1.5 km from New Halos. Sherds indicate occupation in the 5th - 4th c. B.C. as well as in Byzantine times (Vollgraff 1908; Reinders 1988a, 159ff; 1988b; Efstathiou, Malakasioti & Reinders 1990, 1991).

The reasons for the abandonment of the Magoula Plationiki and the foundation of New Halos appear to be linked to the Macedonian interventions in Thessaly. In 352 B.C., when Philip II of Macedonia began his conquest of Thessaly, he faced opposition from Athens. Halos was one of the few poleis in Thessaly to side with Athens. In 346, however, Athens abandoned its resistance. Halos was captured and destroyed, its area was given to the city of Pharsalos and its inhabitants were dispersed in surrounding villages.

In 302 B.C. the armies of two rivals for the possession of Macedonia, Demetrius Poliorcetes and Cassander, were encamped opposite each other in Thessaly. No battle was fought, however, as Demetrius was ordered back to Asia Minor by his father, who needed his assistance there. It is very likely that the founding of New Halos is connected with these events of 302 B.C. The new location of the town was of strategic importance for that phase of the struggle and it seems clear that its founding was not an isolated event. New Halos and the inland town of Peuma formed two ends of a defensive system consisting of a string of forts along the northern slopes of the Othrys mountains. These forts effectively blocked all overland routes from Tempe to Thermopylae (Wieberdink 1990a, 1990b; Reinders 1986, 1988a). It seems likely that Demetrius founded these fortifications to consolidate his position in Greece during his absence.

That New Halos is a continuation of Old Halos is shown both by its name and its coinage (Reinders 1988a, 164f; 1988b). Therefore it can be assumed that the dispersed inhabitants of Halos and their descendents formed at least part of the population of New Halos. The city must also have received its territory back. This would fit in well with Demetrius' policy of restoring (nominal) independence to Greek cities.

The site of New Halos was strategic (Fig. 2). With salt marshes to the east and the Othrys mountains to the west, only a small strip of land provides a route from the Sourpi plain in the south to the plain of Almiros (known in antiquity as the Krokian plain). New Halos completely blocks this passage.

The city was divided into three main areas (Fig. 3). The lower city formed the residential section of the town. It is estimated that it consisted of a built up area of 41
hectares, with approximately 1440 houses. The layout consisted of a regular, orthogonal, grid-like plan. The upper city was located on the slope of the hill to the west, and was triangular in form. Here the buildings were detached and followed no specific plan. At the apex of the triangle the city was dominated by the triangular acropolis fort. Beyond this lie remains of a second fortress belonging to Medieval times.

New Halos is not the only major city founded in this region in this period (Fig. 4, Reinders 1988a, 189ff). In the last quarter of the fourth century B.C., an equally strategic town was founded on the Goritsa hill near Volos (Bakhuizen 1972a; 1972b; 1986; Bakhuizen e.a. 1973; Boersma 1983). The name of this town is unknown, but its foundation was apparently linked to the establishment of Macedonian domination in the region.

In New Halos and Goritsa military considerations were paramount. After 294 B.C., however, once Demetrius Poliorcetes had established his domination in Thessaly, the situation changed. Shortly before 288 he founded a third city in the region, Demetrias, much larger than either Goritsa or Halos (Marzolf 1980). Its location was determined by the excellent harbour facilities of the site. The importance of Demetrias is
shown by the fact that it was considered the second capital of the Kingdom of Macedonia. After its foundation the importance of Halos and Goritsa diminished (Reinders 1988a, 194).

It is not yet certain when New Halos was abandoned. However, the excavations have revealed only one find-layer and all coins found so far date from between 305 and 265 B.C. (Reinders 1988a, 170). None of the pottery found is incompatible with these dates. Reinders (1988c) assumes that Halos was abandoned following an earthquake around 260 B.C.\textsuperscript{2}

\textbf{Research}

Between 1976 and 1991 fieldwork took place at Halos almost every year. Halos is a "low budget" project. In general, fieldwork lasts for about a month, with, on average, about 12 participants, mostly student volunteers. On rare occasions, one or two laborers have been hired locally. In recent years the excavations alternate with separate campaigns aimed at drawing and describing the finds. These generally last a month as well, with three to five participants.

To begin with, the visible surface remains of the city were mapped. This was feasible as the find-layer lies directly below the surface and continues to a depth of little

\textsuperscript{2} There is evidence of very limited reoccupation of the site in the 2nd century B.C., specifically in one of the city gates.
New Halos

more than 0.30 - 0.40 m. A fair number of house foundations and large sections of the city-walls could be traced with relative ease. At times small trenches were dug, or the topsoil was cleared away to clarify certain details.

Fig. 4: The Pagasitic Gulf and the location of Goritsa, Demetrias and New Halos (Source: Reinders 1988a, Fig. 105).

One building in the upper city was excavated completely, but the houses in the lower city demanded more urgent attention. They were rapidly being destroyed by farmers using newly available mechanized ploughs and buldozers. Only a handful of relatively undisturbed houses now remain on the site. Between 1978 and 1991, therefore, five houses were carefully and completely excavated.

Research is not limited to the Hellenistic city itself. Reinders (1988a) also devotes attention both to the surrounding area and other periods than the Hellenistic. Projects carried out under his supervision include a survey of the Hellenistic forts in the Othrys mountains (Wieberdink 1988; 1990), palynological research providing
S. E. Hijmans

environmental information for the area from about 5000 B.C. (Reinders & Bottema 1983, Bottema 1988) and paleogeographical research. An archaeological survey of the surrounding countryside was begun in 1990 by a joint Greek-Dutch team of the Volos museum and Groningen University (Efstathiou, Malakasioti & Reinders 1990, 1991). Further excavations within Halos as well as the continuation of the regional survey are planned.

The City Walls

The city walls formed the most impressive aspect of New Halos. Walls of the Hellenistic, Byzantine, and Turkish periods are described and discussed by Reinders (1988a, 51-107). I will limit myself here to the Hellenistic walls.

Fig. 5: Facing blocks of the city-wall between towers 13 and 14
(Source: Reinders 1988a, Fig. 35).

The walls of the lower city, the upper city and the acropolis were built largely along the same lines. Despite the fact that nowhere more than three courses of stones remain, it is assumed that the walls were constructed completely of stone, rather than a stone socle and a mudbrick superstructure. There is evidence for at least a fourth course and the visible remains of the walls of Halos are up to 3 m in height (fourth course not included), too high for a stone socle of a mudbrick superstructure, which was usually no more than 1.50 - 2.00 m high in Hellenistic city walls (Reinders 1988a, 70-72).

No trace was found of the East wall of the lower city. Of the other walls enough remains to make a full reconstruction of their course. The manner in which the lower and upper city were linked has not been established, however.

The walls consist of facing blocks and a rubble core and are between 2.75 m and 2.90 m wide. Every 40 m the walls are reinforced by towers, varying in size from 6.15 m x 5.40 m (upper city) to 6.75 m x 6.35 m (northern and southern wall). Maximum use was made of the (few) natural defences available. All blocks used in the walls were quarried locally. Their shapes are irregular, and the sizes vary: 0.50 m - 0.80 m wide by 0.55 - 0.70 thick and high. The tops and bottoms are smoothly finished to provide the necessary level surface. The sides are usually not straight, and finished roughly, enough
New Halos

Fig. 6: Cross section of the city-wall between towers 36 and 37, showing the foundation (Source: Reinders 1988a, Fig. 32).

Only to provide a good fit with the neighbouring blocks. The inward face of the blocks was always left unworked. The blocks were laid in courses, but the lines of these courses were not strictly adhered to (Fig. 5). For the foundation, a trench of 0.3 - 0.5 m deep was dug down to the pleistocene soil, which forms a hard, solid layer (Fig. 6). In this trench large, relatively unworked blocks formed the foundation, projecting about 0.2 m beyond the wall to either side.

Some traces of local quarrying were found, but not enough to reconstruct with certainty the technique used. It is clear from the remains that a system of slots and wedges was used. Reinders (1988a, 60-64) assumes that the wedges were of wood, rather than iron. In each slot, a central wedge fitted tightly into the bottom, and the remaining room at the sides was filled by two further wooden wedges, providing strong lateral pressure. Water, poured onto the dry wedges, was absorbed by the wood which subsequently expanded, cracking the rock (Reinders, pers. comm.). The stages of quarrying, as proposed by Reinders, are summarized in Fig. 7.

A striking aspect of the enceinte of New Halos is the large number of closely spaced towers. This confirms the military aspect of New Halos. Reinders (1988a, 81f) points out that only a few cities, Mantinea and Dion in particular, have as high or even higher a concentration of towers. It appears that the lower part of the towers was filled
in. Access to the upper storeys was gained by stairs leading up to the ramparts along the interior of the walls.

Fig. 7: Stages in the quarrying of local rock (a-d); traces of wedge-holes (e)
(Source: Reinders 1988a, Fig. 31).

Three main gateways and one minor gate were studied, although more detailed excavation is desirable. The main gateways of the lower town are of the "courtyard" type. Basically, courtyard gates consisted of a front section between two towers followed by two courtyards. The front was not closed by gate doors, but the spur walls separating the two courtyards could be.

The Acropolis
Halos was protected at its highest point by a fairly small, triangular acropolis, created by a cross-wall built at the height of 165 m. (Fig. 8). Its obvious goal was to provide Halos with protection against bombardment from the heights which dominate it to the west. By analogy with similar fortresses, it can be assumed that the apex of the triangular acropolis was formed by a strong battery (Reinders 1988a, 59). Some foundations were found within, but no buildings inside the acropolis have been traced.
The Upper City

The triangular upper city was enclosed by two walls running upwards from the western wall of the lower city (approximately 20 m above sealevel) to the acropolis. The original length of the walls was about 1 km each, but recent road-building and quarrying activities destroyed parts of the lower stretches of the walls. There is no trace of a regular layout in the upper city, but quite a number of foundations were found. Reinders (1988a, 135) estimates that there were originally about 20 to 25 buildings here, their location determined by the suitability of the slope.

Many of the buildings are quite large (building 6, e.g., measures 35 x 30 m.), and Reinders tentatively suggests that they were public buildings. As virtually no trace of public buildings was found in the lower city (see below), this implies a separation of public and private areas in Halos. Such a separation would be exceptional for a Greek town (Reinders 1988a, 137).

One small building had foundations which could be traced completely, and its remains were excavated to provide some further idea of the function of the upper city (Fig. 9). The building, 10.40 m. long and 8 m. wide, was divided in half by an east-west wall. Each half consisted of two rooms. There was no communication between the two halves. The northern rooms were reached by a large entrance, 3 m. wide and three steps high. The southern entrance was only 1.20 m. wide.

Only one course of the foundation, made of small blocks of local lime-stone, was found. Poros rock was used for the entrances. By analogy with the houses in the lower city (see below), it is assumed that the walls were of mudbrick with a stone foundation. A large number of terracotta roof-tile-fragments lay throughout the building.

To the surprise of the excavators, the largest room contained a grave with a double burial. Its orientation placed the grave at an angle with the building, but followed the strike of the rock exactly. Nine poros blocks lined its sides, and two bloks
formed a partition, forming two graves, 1.60 and 1.80 m. long respectively, and 0.80 wide. Each grave had been covered by three flat lime-stone slabs. *Poros* is a type of stone not found in the immediate vicinity of Halos. The use of *poros* rock in both the graves and the building shows that they must be seen as one unit despite the difference in orientation.

Fig. 9: Plan of the Sepulchral Building, showing the distribution of artifacts (Source: Reinders 1988a, Fig. 91).
The building and graves had been partially looted. In rooms three and four, most artefacts were found in the disturbed upper soil, and room one contained only a few scattered finds. Only in room two did the finds seem to be relatively undisturbed, lying under a concentration of stones and rubble.

Despite the fact that the more valuable goods had been stolen, the finds from the sepulchral building were quite impressive. Many small hydrias as well other pottery types were found. Hydrias are well known as votive offerings both in graves and shrines (Reinders 1988a, 144). Many female figurines were also found, most of terracotta, but including one marble head and a marble arm. Quite extraordinary was the find of a large ceramic head with a square opening where the face should be. The function of this head is not clear. Its material is poorly baked clay, but Reinders (1988a, 144) suggests that it may have been covered with some precious metal. Terracotta fragments of two thymiateria also deserve mention, as well as a stone axe, found in room two. So far the publication of the finds has only been provisional (Reinders 1988a), but the second volume of excavation reports (forthcoming) will include a full discussion of all finds.

The location of this sepulchral building within the enceinte of Halos is unusual, but Reinders (1988a, 147) does not believe that it is an older structure, incorporated in the city at a later stage. The coins and pottery found date the building to ca. 300 B.C., and architecturally it fits in well with the others in the upper city. Reinders therefore suggests that those buried in the graves were prominent citizens of Halos, involved in the founding of the Hellenistic city.

The Lower City

The roughly rectangular lower city had a regular grid-plan which was defined by three avenues running approximately north to south, crossed by the central main avenue which ran from East to Weast and which was flanked on either side by seven streets (Fig. 10). The city was thus divided into housing blocks which were either 187.5 m. or 220 m. long, and about 31.5 m. wide. This width is not unusual; the exceptional length of the blocks, however, is comparable only with that found in certain Greek cities in S. Italy.

Each block consisted of two rows of houses. The width of the side of the houses facing the street varied, some being 15 m., some 13.75 m., and some 12.5 m. wide. The depth of all houses was equal: ca. 15 m. So far, all houses studied have shown evidence of one storey only. There is, however, no standard ground plan.

Little trace has been found of any public buildings or temples in the lower city. However, in many parts the remains are too scanty to provide adequate information. There is some evidence, for instance, that the agora, situated along the main avenue,
S. E. Hijmans

may have been faced with monumental buildings, but unfortunately virtually all foundations in this part of the city have been removed by farmers (Reinders 1988a, 134).

Fig. 10: Plan of the lower city. The main avenue ran between blocks 1-4 to the North and 5-8 to the South (Source Reinders 1988a, Fig. 69).

To date, six houses in Halos have been studied in detail. Of the first, known as house A, the investigation was limited to the extensive clearing of the foundations (Reinders 1988a, 113-117). The other houses were excavated completely, but full publication is still forthcoming. Most fully published to date is the House of the Coroplast, excavated in 1978 and 1979 (Reinders 1988a, 117-134). In 1984 the surviving half of a (nameless) house was excavated (no preliminary publication). In 1987 and 1989 two neighboring houses, 21 and 22, were excavated (Fig. 11; Reinders 1988c, 1989). Both houses had survived virtually undisturbed. In 1991 house 18 was excavated, but turned out to be partially disturbed (Haagsma, forthcoming).

Only one occupation level was uncovered, between 0.10 and 0.40 m. deep. From bottom to top this consists of: the pleistocene soil on which a layer of cobbles and pebbles which as the floor; a layer of artefacts; a layer of rooftiles; topsoil mixed with rocks and worn sherds.

Location and size of the houses: House A, 15 x 15 m., block 6.2; House of the Coroplast, 13.75 x 15 m., block 2.7; nameless house of 1984, 15 x 15 m., block 2.8; houses 23 and 24, 12.5 x 15 m., block 6.4; house 18, 15 x 15 m., block 6.4.
New Halos

The houses were constructed from local stone (for the foundations) and mudbrick. The roofs consisted of wooden beams fastened with iron nails (Reinders 1988a, 131), and were covered with rooftiles. In most houses only one building phase can be identified, but in house 18, excavated in 1991, there is clear evidence of at least two different phases (Haagsma, forthcoming).

Fig. 11: Plan of houses 21 and 22 (Source: Reinders 1989, Fig. 3).

In the artefact layer many crushed but complete pots are found, as well as metal tools and artefacts. This shows that the houses were not empty when they collapsed. The find circumstances strongly support the hypothesis that Halos was destroyed by an earthquake in about 260 B.C., and subsequently abandoned (Reinders 1988a, 131-134; 1988c, 25; 1989, 49; Haagsma & Reinders 1991).

This fact makes the excavations carried out in the houses of Halos valuable. We are dealing here with relatively complete house-inventories, found in situ, which can be quite accurately dated to the years immediately preceding 260 B.C. For this reason the houses are excavated with extreme care. Only one house is excavated at a time. Fielddrawings are made showing all artefacts and sherds (including rooftiles) found in situ, and the exact findspot (coordinates and depth) of each is registered. All finds found in situ (except some rooftiles) are preserved in the depot, where they are restored, drawn, described and photographed. Only insignificant finds (worn sherds, wall-fragments without context, rooftop fragments, etc.) are thrown away, after having been divided into categories counted, weighed, and registered. Fortunately, in Halos most vessels found are virtually complete, albeit fragmented. With only one find-layer, Halos is the only Hellenistic city excavated to date which provides such detailed information about
Hellenistic houses. Full publication of the finds (forthcoming) will provide valuable dating criteria for early Hellenistic kitchen-ware. Careful study of the spread of the artefacts will provide information on the use of space in Hellenistic houses (Reinders 1988a, 121-129; Haagsma 1990). Architecturally, the houses of Halos provide new information as they do not conform to the known Classical and Hellenistic housetypes such as those found at Priene, Delos or Olynthus.

This detailed corpus of data provides a unique basis for the study of daily life in Hellenistic Halos. M. J. Haagsma is currently involved in a project aimed at utilizing these data in this manner. Such research is very necessary. So far, analysis of Greek houses has been based on rather inadequate ancient sources (concerned almost solely with Athens) and excavations which took place in too short a span of time and on too large a scale (Haagsma 1990, chapter 4). Attention has thus tended to focus on the architecture only. The function of individual rooms was guessed at on basis of the written sources. In the view of M. H. Jameson, however, "careful analysis of artefact-distribution, especially on sites abandoned after sudden disaster, can add nuance and complexity to the purely architectonical evidence". Halos has much to offer in this respect.

The Finds

From the preceding it is clear that the finds of Halos are important for a variety of reasons. Individually, they are accurately dated examples of early Hellenistic objects. As a group they provide relatively complete house inventories.

So far, only a small selection of finds has been published, and even those only in a preliminary fashion (Reinders 1988a, appendix 4, 252-311). Relatively more extensive is the publication of the coins (Reinders 1988a, appendix 3, 236-251). A full descriptive publication of all finds is in preparation.

In general, the pottery found in Halos consists of coarse "kitchen-ware" and storage pots. Fine ware is rare, rarely of very high quality. Non-ceramic vessels (either stone or metal) were also used, but evidence for them is slight. Many terracotta loom-weights have been found. These are either pyramidal, discoid or (rarely) conical.

Iron, lead and bronze objects are abundant in Halos. They include farm implements, weapons, kitchen tools, vessels, and jewelry, as well as structural elements such as nails. The good state of conservation of the iron objects is remarkable.

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6 The only comparable site is Olynthus, which dates to Classical times. Here, however, the stratigraphy is more complex and the documentation of the finds less exhaustive.
7 Kassope provides the closest parallels (Reinders 1988a, 130; 1989, 50).
9 Finds of northwest gate, the acropolis gate, the sepulchral building, the house of the coroplast, and a variety of surface finds are given a short description per artefact. A small selection is also illustrated. There is no analysis or comparison of the finds.
New Halos

A fair amount of bone has been found, although often the fragments are too small to be identified. A variety of shells also deserves mention (e.g. Reinders 1988a, 128).

In general, the finds give evidence of a simple existence based on crop and sheep-farming, hunting and fishing. The many figurines and molds found in House of the Coroplast, however, show that light industry also existed in Halos (Reinders 1988a, 123-126).

Surroundings

Figure 12 shows the chora of Hellenistic Halos, as reconstructed by Reinders (1988a, 152ff). This area has been inhabited at least since the neolithic age, and Reinders (loc. cit.) provides a summary of the archaeological data for all periods collected so far. I shall limit myself to the Hellenistic forts and Peuma, as they are most closely connected to Hellenistic Halos.

![Figure 12: The chora of New Halos (Source: Reinders 1988a, Fig. 95).](image-url)
From the Krokian plain (now the plain of Almiros) there were two main routes to the south. One passed along the coast to the Scourpi plain. This route is blocked at its narrowest point by Halos. The other is by way of the Enipeus valley to the North and East of the Othris. This passage is blocked by Peuma, a small fortified town about 25 km to the West of Halos. The Othris mountains themselves, however, do not form a very formidable hazard. As Wieberdink (1988; 1990) points out, it would not be difficult to bypass these two cities if they stood isolated. This explains the presence of at least five forts and a watchtower between Halos and Peuma.

These forts are invariably placed on a high spur overlooking a valley. Steep slopes on three sides make the forts easy to defend. They are quite small, the fort near Ayios Nikolaos, e.g., measuring only 100 x 60 m. (Fig. 13). The forts were all in use during the Hellenistic period, and it seems likely that they were built at the same time as Peuma and Halos. They served two functions, for they blocked various minor passages through the Othris, and they were placed in such a way that from each fort at least two others were visible; thus signals could be passed on from one fort to the other.

The founding of the forts appears to be linked with that of Halos. Yet there is evidence that the forts continued to be used, sporadically at least, long after the city of Halos had been abandoned. It is possible that the forts, including Halos and Peuma, functioned as a defensive chain during the various wars between Macedonia and her neighbours in the third cent. B.C. Individually, they may have been adapted into village settlements, as appears to be the case at Vrirena, the only fort to yield abundant Roman pottery (Wieberdink 1988; 1990).

Fig. 13: Plan of the fort near Ayios Nikolaos (Source: Reinders 1988a, Fig. 100).

The remains of Peuma have received scant attention; cf. Reinders (1988a, 170) and F. Stählin, in RE s.v. Peuma (1938).
Conclusion

From a traditional historical point of view, New Halos is unimportant. The town is hardly mentioned in the literary sources and obviously played only a marginal role in the mainstream of history. As I have tried to show in this article, Halos is, however, extremely important from a modern archaeological point of view. The houses excavated at Halos have been preserved so well that they provide a unique collection of data on early Hellenistic kitchenware, farm equipment, city planning and house-building, not to mention the functioning of houses and households in the Hellenistic period. Should more, comparable, sites be studied in a similar manner, this could vastly increase our understanding of the functioning of households, cities, and regional economies in Greece.

In this sense, Halos can also serve as an unfortunate warning. Deemed unimportant and uninteresting by general consensus until recently, Halos was virtually ignored until 1976 in favor of more "important" (re: famous) sites. By then, the vast majority of its houses had been irretrievably destroyed so that only a fraction of its potential information can now still be tapped. One wonders how many other sites with a comparable potential for information have, by now, been even more thoroughly destroyed. As Halos shows, with the arrival of efficient, mechanized farm machinery, archaeological sites which have survived intact for centuries can disappear within a decade. Archaeologists throughout the world are well aware of this danger; it is to be hoped that the responsible authorities and funding agencies can also be made to see the problem more clearly.

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