



Reconstruction of the Biskupin Houses

by Dr Peter Reynolds

There is little doubt but that Biskupin represents one of the most fascinating archaeological discoveries of this century. Claimed to be the Pompeii of the north, while it does not exactly compete, there is a great degree of truth in the claim that to date it supplies vastly more insight into an early Iron Age occupation site than virtually any other. That this is the case, particularly for the structures, is discussed in this contribution.

The recent history of the site of Biskupin, its discovery, subsequent promotion with public and finally state support, is discussed in detail elsewhere (Lambor, *Popular Archaeology* February 1982). The reasons for the interest it aroused and its final successful adoption by the state are the same – the remains were such that anyone could imagine not just another “archaeological” settlement site, whatever that may actually mean, but a whole village in which people had lived and had their being, which could be understood even to the extent of isolating a bedroom area, a full scale hearth, the nature of the front door, even pottery with remnants of food within it. This was not the normal “stuff” of archaeology where the eye of faith trained by long experience guided credulous disciples through a maze of pits and post-holes to an almost untestable and imagined reality. Biskupin actually provided not just shadow ground plans of empty post-holes and timber slots, but the posts and timbers themselves. The timber engineering was observable in practice rather than hypothesised principle. The organic deposits have yet to yield up their full wealth, not a fault of the original excavators, rather a reflection of the advances made in archaeological disciplines during the last twenty years. One has high hopes that the environmental deposits at the adjacent but much larger settlement of Sobiejuchy, currently being researched by teams from Poland and Britain, will give a fuller picture of the economy of these fortified settlements.

Perhaps the most fascinating aspect of Biskupin is the timber. The manner of its survival in waterlogged conditions need not concern us here; simply the fact that the ground plans with intimations of the nature of the superstructures of houses, palisades, breakwaters, entrance towers and the like have survived for study is quite remarkable. No wonder that reconstructions of elements of the village

were commenced very soon after the excavations started. It was a unique opportunity to communicate more possible answers to the questions always asked of excavations – what did the buildings look like and how were they used.

However, even though the ground floors survived for specific examination and a basis for reconstruction, the superstructure is still not at all simple to envisage. In the excavation reports relating to 1938–39 and 1946–48 (*Compte-Rendu Des Fouilles De Biskupin en 1938–39 et 1946–48*, Poznan 1950), a considerable amount of attention is paid to the reconstruction of the houses with a surprising variation in end product Figures 1 and 2 are directly based upon the architect's drawings for the reconstructions of the houses actually built on the Biskupin site (Architect J. Gontarczyk, 1968). The plan (Fig. 1) gives the basic excavated data in “new form” of part of one of the terraces at Biskupin. From it can be seen both the regularity of design and also the irregularities of shape. The building units are not “squared off” in the sense of a modern brick building – although the modern house which actually has perfect right angles and vertical walls has probably yet to be built – most amateur home decorators are bemused by the lack of correlation between the wallpaper which they know is accurate and the walls which should be accurate. The irregularities of basic form of the Biskupin houses are often compensated, arguing that one is actually dealing with a terrace rather than any other concept. As such the construction of a common roof spanning a number of dwelling units is most probably correct (Fig. 2). Further, given the principle of a thatched roof – the availability of reed would not be a problem given the nature of the landscape – the roof pitch of 45° is fundamental for a waterproof structure. However, to thatch a single unit of a terrace would require a minimum of three tons of reed with an optimum of five, leading to a basic requirement for the village of five hundred tons, which in turn represents some 200 hectares of reed bed.

To discuss in detail all the potential variations of construction would require a much larger treatise than the present note. Yet it is well worth studying Figure 1 because of the joinery and building techniques there represented.

One is dealing with a very sophisticated advance upon the traditional log cabin design. The corner and intermediate posts, for example, are vertically grooved to accept the shaped ends of logs. A framing therefore has to be presumed in the upper part of the structure to lock the sides of the building together. The system of spreading the load expressed by each vertical timber is similarly sophisticated with horizontal timbers being pinned through the base of each upright below floor level. The carpentry is also of a high order and far in advance of that ordinarily attributed to the prehistoric period.

The proposition that the village of Biskupin, its houses and streets, fortifications and breakwaters, let alone its massive substructural foundations, was built according to a preconceived plan as a single building programme is quite logical in this case. The more usual argument of gradual development cannot really pertain simply because of the complex engineering required to stop the superstructural elements from subsiding into the bog under their own weight. Given this proposition the logistics, planning, quantity assessment and supply of materials, let alone the engineering and construction skills, are daunting. The man management to achieve the completed village almost defies the imagination. What is particularly fascinating is the nature of the timber raw materials. All the evidence points to a remarkable uniformity of the raw materials required. Isolating just the logs for the wall structures alone, the customary length needed in log form was 3.35 m, the longest required for the structure with an average diameter c. 0.30 m. Presumably the builder's order for materials to the forester would specify whole requirements. Were one to set out to build just one house of a typical Biskupin terrace the material indent would be as follows:

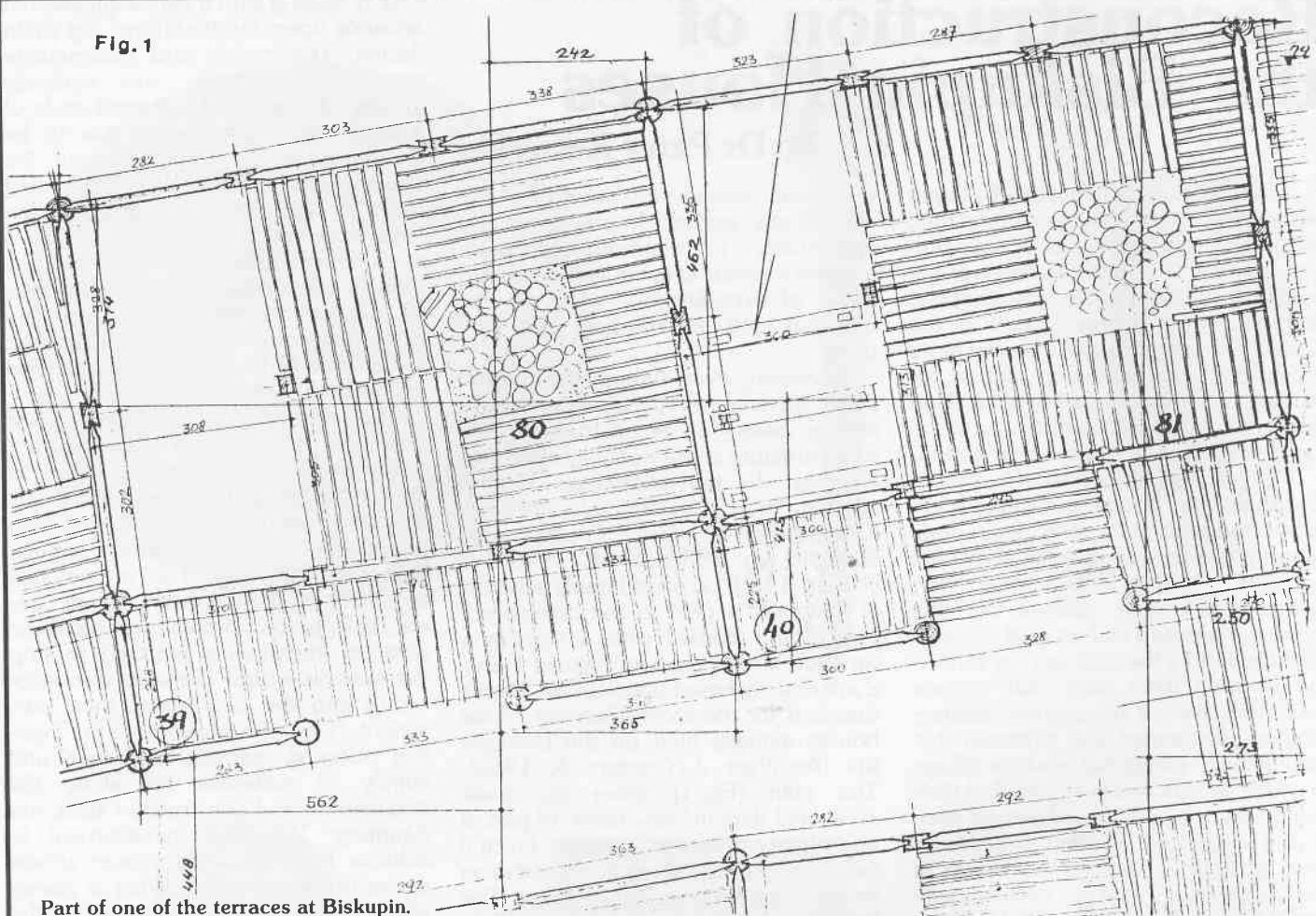
Quantity	Length	Diameter	
1	6.00 m	0.20 m	(Ridge pole)
1	3.50 m	0.20 m	(Ridge pole)
28	6.50 m	0.20 m	(Rafters)
28	8.00 m	0.20 m	(Rafters)
12	3.50 m	30–50 cm	(Main studs)
3	7.50 m	30–50 cm	(Principal studs)
240	3.35 m	0.30 m	(Infill)
73	9.00 m	0.04 m	(Purlins)
120	3.35 m	0.20 m	(Flooring)

For 102 dwellings the multiplication isn't quite a simple one in that party walls would reduce the indent by a small percentage. However, by simple analysis of the diameters of the timbers involved one is looking at two distinct age groups of trees, the first 20–25 years, the second 40–50 years old. Given the need for such timbers to be as straight as possible and as uniform in diameter as possible, clearly indicated by the surviving material, some kind of

BISKUPIN EXHIBITION



Fig. 1



Part of one of the terraces at Biskupin.

TECHN-ROB * ELEWACJE WSCHODNIE CIAGÓW DOMOSTW

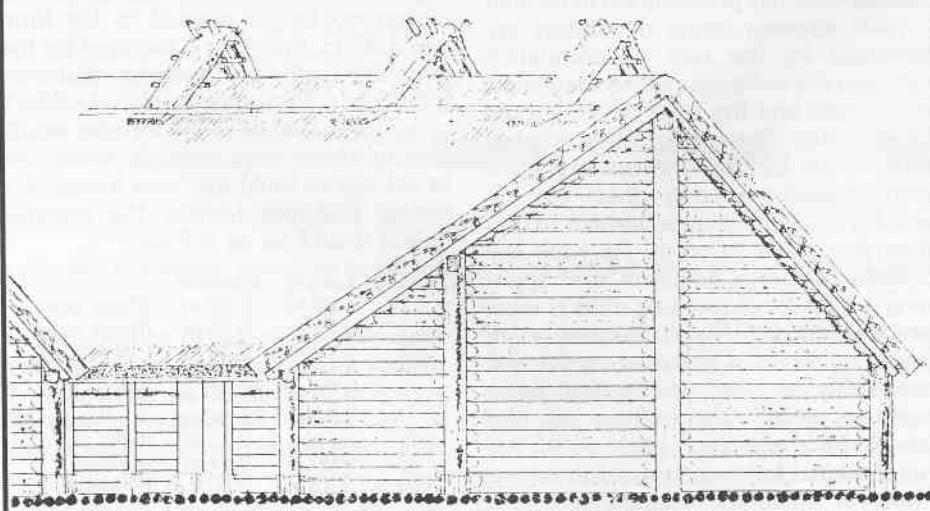


Fig. 2

Detail of common roof spanning several dwelling units.

managed woodland has to be postulated and even, one could argue, specific stands of timber of a single age group. It is extremely unlikely by this time, the early Iron Age, that any "wild wood" was used. The original forest was most unlikely to have been available

and even if it were, the very nature of a "wild wood" militates against such stands of single age timber. To substantiate further this proposition of woodland management, the requirements in tree form for a single house are as follows:- at 20-25 years 118 trees, at

40-50 years 150 trees. This is a much more telling manner of representation than a computation of cubic capacity of timber required. For all the houses in the village of Biskupin, a minimum number of trees combining both categories is 27,300. To increase the calculations to include the roadways, palisade, breakwater, watchtowers, etc., would require multiplication by a factor of at least three. The deforestation, whether of managed woodland or not, ultimately caused problems of flooding and despite the vicissitudes of fortune, the village was burned down and actually rebuilt, the abandonment of the site in favour of small farm units finally occurred.

To conclude, the implications of the Biskupin houses are hardly touched upon in this short contribution. The objective has been primarily to present the enormity of the undertaking in a simple and comprehensible manner. There is still a wealth of information to be extracted from the archaeological data regarding the physical nature of the buildings themselves, the raw materials needed for their construction and the resources these implied as well as the potential full time trades like carpenters, thatchers, etc., that must have existed within this society. □

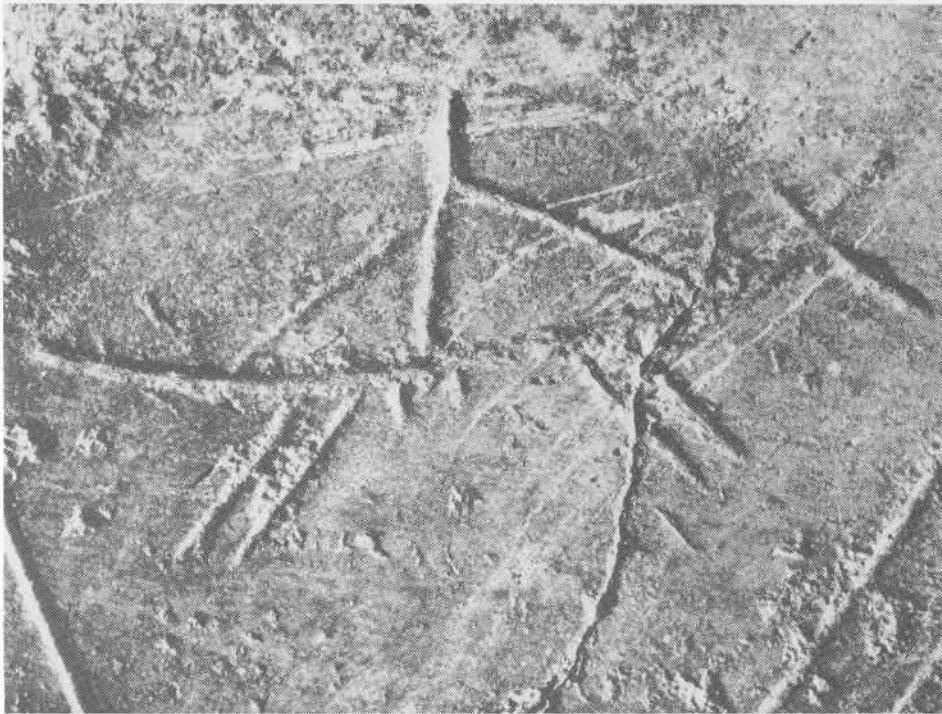


Biskupin for the Visitor

by George Lambor



Reconstruction of the Iron Age village at Biskupin.



Man riding a horse. Decoration on a pottery vessel from Biskupin. (Not in the exhibition.)

The only practical way of getting to Biskupin is by car. There are buses from Poznan with lots of changes, but that is for the hardy. By car – or an organised trip – it is a very pleasant drive. The countryside undulates gently, the meadows and fields of crops keep disappearing behind small woods or rows of trees by the roadside, and no sooner do we

enter a village than we are out of it again. More fields half obscured by clumps of trees, then a glint of water behind the trees, and for a few hundred yards there is in sight the wooden tower of the gateway remembered from so many photographs, but so surprisingly small. Then we are surrounded by birches and a sign appears directing us

to the museum.

Actually the museum is far more than a museum. It is an archaeological complex and as such was the first one in Europe. Virtually the whole of it is open to the public and so far no less than six million people have visited it. There is the usual parking space, snack bar and ticket office, which also sells postcards and souvenirs. But even here the Late Bronze Age echoes in the strange large wooden sculptures scattered around which are modelled on the matchstick stags and horses on the Lusatian pots.

The reservation has two focal points – if there can be focal points in an area which appears to be all trees: tall trees, small trees, shrubs and birches, restless birds shooting from tree to tree, a frog keeping you waiting as it hops across the road from one clump of trees to another. A short walk from the entrance there is a crossroad where stands a little cottage of the Paluki region, once someone's life style, now a veritable museum piece complete with a well and a collection of household tools. It is a leftover from the pre-excavation days.

Near the crossroad is the museum, a light, modern building where everything is displayed almost clinically, neatly, exactly, with explanations and charts and graphics amid lots of space. To someone used to the long-established museums, this one gives the impression of being built with room left for growth, and the lack of clutter for empty space.

After the museum, another walk through the woods, then again a glint of water signalling like a traffic light the presence of the settlement. Indeed, there soon appears a long stretch of the reconstructed wooden wall.

After that, Biskupin just explodes around you. Many different sights appear almost simultaneously in this small oval area 200 by 160 metres: the entrance gate, partially reconstructed streets of houses, beside them a long, waterlogged lower course of the defensive wall; and rows and rows of sharpened stakes lying at an angle, protecting the shoreline. Some of these are hidden by tall rushes, and for so many centuries were lying just inches below the waters of the lake, before the level dropped. How many boys fishing by the lakeside must have trodden on them without ever realising what they were.

The site is a deliberate mixture of open excavations, turf still covering the unexcavated areas, and reconstruction which sometimes ends very abruptly. Naturally the excavated parts are the most prominent. This is the seventh version and so far the most successful one. Although the amount of remains is truly enormous, much of the upper part of the structures remains a matter of speculation. Reconstruction is the best

BISKUPIN EXHIBITION

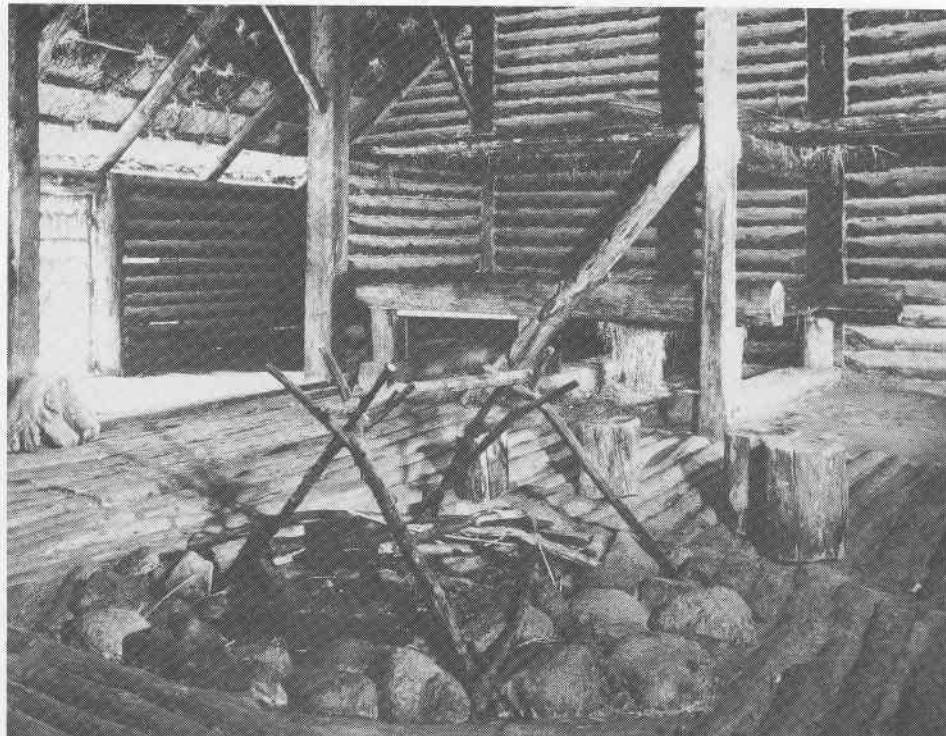
way of passing judgement on such speculation, so the bridge from the mainland has been reconstructed, with the entrance gate, and a large stretch of the wall. There is also one complete street and one partially reconstructed. One of the houses has not only been rebuilt, but also refurbished. In the hallway there are odds and ends of tools scattered about; the main room is large, with the gabled roof giving it the feeling of even more space; the hearth has simple log stools around it, various wooden containers for mixing the dough or gathering food. An upright loom stands in the corner, and on the left, raised more than a metre off the ground, a sturdy bed. Sturdy it had to be as ten people slept on it. One of the "Biskupin ladders" leads up to it: a thick log with steps cut into it. The room is cosy but naturally on the dark side. The light comes in through the wide front door, and there are a number of small rectangular vents cut into the logs forming the wall.

Life must have been very claustrophobic in Biskupin for if you came out of the front door and tripped over the step, your hands would touch the back of the next house. With logs and thatch all around, the thatch started almost at eye level. A thousand people living in such close proximity must have either found the secret of happy living, or were frequently on screaming terms with their neighbours.

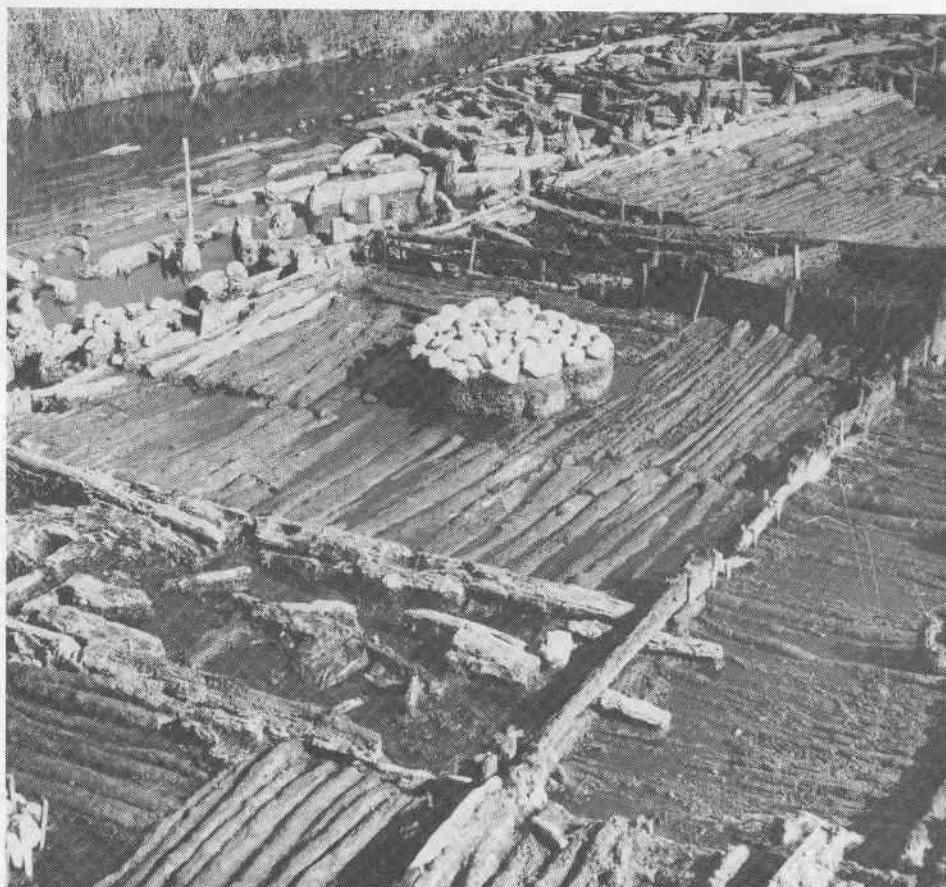
Even the rankest amateur has to be impressed with the excavations and the remains. The impression of a mass of logs lying scattered around quickly gives way under focus and shows the regularly spaced hearths – round platforms of stone. The eye quickly follows it up by tracing the lower courses of the house walls and distinguishing them from the floor lined with beams arranged in two directions. The cat-walk streets identify themselves next, and after that everything starts falling into place: the circular street, the wall. The eye hesitates over some incongruities: what are those posts sticking up inside the hallway? Must be the upright posts of a house. Some even have the grooving like the uprights of the reconstruction. But what are they doing *inside* the house? Then the thought comes: there were two settlements, one after another. Those then are the remains of the previous one.

It takes an archaeologist to identify other features. There are remains of more than two settlements bared there for those who can distinguish them, the latest from as late as 6th–10th centuries AD. As the guide points out, it becomes even more apparent what the archaeological excitement is about. This is an absolutely open book on archaeology.

Biskupin is a very strange exper-



Inside the reconstructed house. In the foreground, the hearth. Above it is a storage space, with a bed higher up to which leads a diagonally placed ladder. On the left is a partial view of the hallway and the front door.



View of the lower course of the houses; on extreme bottom right is the street. Immediately to left the hallway. Beyond the main room with the hearth. The area below it contains on the right remains of the communal bed (seen better in the house above) and the nook of the room.

The three uprights appearing from the floor of the hallway are the remains of the first settlement. Flooded on top left is the circular street.

Photo: W. Kocka

ience. It's not a ruin. It's not a museum. The combination of the elements which go to make it result in one of the most

interesting experiences both as a teach-in, and as a moving and atmospheric hand-shake with prehistory. □