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The Nature of Environment, with Special Relation to the Country of Jordan¹

Summary

Environment is 'process,' its primary characteristics being continuity and change. It may be studied under five headings: i. Physical, both 'geographical' and 'operational'; ii. Perceived environment, both 'perceptual' and 'behavioral'; iii. Cultural environment; iv. Interaction between human beings and their environment; v. Human environment. Pre-pottery Neolithic Jericho, Jawa and the basalt region provide examples of the difficulty of rediscovering the perceptions of ancient man. The concept of environment as process is particularly applicable to Jordan because of its position in the land-bridge between Eurasia and Africa. Also, because of Jordan's marginal position, both climatically and botanically, the study of micro-environments is here especially important. There is need for caution in transferring biblical (and therefore West Bank) perceptions to the territory east of the River Jordan.

The argument I wish to present is that *environment, properly understood, is process*. Its primary characteristics are, at the same time, continuity and change.

In speaking of 'environment' we are concerned with space, place and time. Our environment is everything around us, our entire world, which is an indivisible unity. This is *space*, in its largest sense. It includes, not only the surface of the globe, but also what lies far beneath the surface, and also the air, the sun and the moon, and everything else beyond which affect the earthly sphere. More restricted and localized environments constitute smaller spaces. *Place* is different. It is something, or somewhere, within space, and particularly the point where we ourselves are, and from which we observe and study place. There is, of course, not merely one 'place,' but a vast multitude of 'places,' of centers of human observation, on the surface of the globe, and likewise a multitude of 'spaces.' But space and place and we ourselves are subject to the absolute conditions of *time*, of beginnings and endings, of change, decay, and new birth.

¹I am especially grateful to Professor Roger Boraas, of Upsala College, East Orange, New Jersey, to Professor Basheer Nijim, of the University of Northern Iowa, and to Dr A. D. Tushingam of the Royal Ontario Museum, Toronto, Canada, for their kindness in taking time to read the first draft of this paper, and for the valuable comments and suggestions made by all three of them.

We may profitably consider this process of environment under five headings:

i) The *physical environment*, i.e. the various natural phenomena, animate and inanimate, their character, the manner in which they are related to each other, and the patterns and mechanisms by which they are subject to change. Thomas F. Saarinen makes a distinction here between what he calls the *geographical environment*, by which he means everything external to man, i.e. the whole world, and within it the smaller circle of the *operational environment*, which is the realm within which men and women operate, whether they are aware of the whole of it or no².

ii) The *perceived environment*, i.e. the natural phenomena of the physical environment as they are perceived and interpreted, often very selectively, by members of the human community. This, of course, overlaps with the first, because the physical environment is known to us only to the extent to which we perceive it. Nevertheless, the distinction is necessary because it would be difficult to deny that mountains, rocks, rivers, lions, goats, and mosquitoes, do in fact exist quite apart from human observation. Moreover, human perceptions vary, and have varied, greatly and it is important to understand how different groups at different times have perceived the same phenomena. Saarinen here again makes a distinction. Within the larger realm of his operational environment he distinguishes a smaller realm, which he calls the *perceptual environment*, i.e. that portion of the operational environment of which the community is aware, and within this again the smallest realm of all, the *behavioral environment*, which he defines as that 'portion which elicits a behavioral response, or toward which behavior is directed.'

iii) The *cultural environment*, i.e. the natural features as modified by human activity, e.g. forest clearing, terracing, irrigation, soil erosion, houses and barns, villages, cities, rough tracks and made roads, cisterns, wells, fortifications,

²Saarinen, Thomas F., *Perception of Environment*. Washington: Association of American Geographers, 1969, pp. 5-6.

cultivated crops, domestic animals, and so on. Wooldridge and East have argued that this is the most important aspect of environmental studies, saying that 'we can take it as a wise . . . practical rule, that, in the first instance, we are well employed in studying the imprint of Man on Land . . . It will be time enough to seek to isolate the effect of Land on Man after much further detailed investigation'³. I myself cannot go so far. I do not think that one study should precede the other, for the two processes have gone hand in hand throughout the whole of human history.

At least ever since the first beginnings of human settlement the environment which men and women have perceived has almost always been a cultural environment. Less and less, even in ancient days, did mankind penetrate where never the foot of man had trod before. Also one cultural environment can replace another and that there can be indeed a succession of such environments in the same space. This brings me to my fourth heading:

iv) *The interaction between human beings and their environment.* There has been in the last quarter of a century or so, and perhaps especially in the United States, a strong reaction against any form of 'determinism,' any suggestion that the physical environment dictates the human response. In the part of the world with which we are here concerned this reaction has been strengthened because of the tendency of some 'biblical geographers' and 'biblical archaeologists' to see the Land as a God-given phenomenon, pre-conditioning the inhabitants to a certain way of life, certain beliefs and certain activities. I wish to dissociate myself firmly from that point of view. Let there be no more statements that 'Le désert est monothéiste'!

But having done so, I remain convinced that the physical environment strongly influences the human beings who inhabit it. I agree entirely with Philip L. Wagner when he insists, 'It is clearly time to say that our environments constrain, select and shape activity and behavior'⁴. It is, after all, always *this* set of environmental facts and not another which any human community, however technologically advanced, has to deal, and which it has to interpret correctly if it is to survive. If men and women set themselves against these facts, they do so at their peril. Certainly, an environment does not *dictate*, but it does offer an always limited, and sometimes very limited, set of options for profitable human activity. Human response to these options, of course, varies according to the technological skills of the community and the creative imagination of its members, but the options are never infinite, and they may often have been brought within a narrow range by earlier human alteration of the physical environment, e.g. destruction of the soil cover.

³ Wooldridge, S. W., and East, W. G. *The Spirit and Purpose of Geography*. London: Hutchinson & Co., 3rd ed. 1966. p. 30.

⁴ Wagner, Philip L., 'Cultural Landscapes and Regions.' (Paul Ward English and Robert C. Mayfield, eds., *Man, Space and Environment*. Oxford University Press, 1972, p. 58.)

v) *The Human Environment.* We have here to recognize the further complication that human beings do not merely perceive and interact with the environment. They themselves constitute environment. 'People rather than things are likely to restrict our freedom and deprive us of space'⁵. People are, of course, human animals, but they are much more than that. They create, and themselves participate in, the social and political environment, which is to say the complicated structure and pattern of ideas, laws, inherited customs, taboos, *rites de passage*, religious beliefs, etc. Foreign armies, religious communities, wealthy merchants and destitute beggars, are all part of environment. The behavior of people, their treatment of the physical landscape, their methods of cultivation, the crops produced, the character of the towns and villages, the exploitation of mineral wealth, the types of artifacts, the political structures and actions, etc., are strongly conditioned, indeed almost determined, by these conceptual environments, these 'worlds,' which human beings have constructed to give order and meaning to their lives. The Jordanian people, the Jordanian way of life, the Jordanian society, Jordanian political activity, the Arabic language, the religion of Islam, and to a lesser extent the Christian religion, certainly Christian and Muslim history, are themselves all essential features of the Jordanian environment. This is a major reason why I have spoken of environment as 'process.' We can never really separate ourselves from it and study it objectively. Environment is both our history and our life.

If we accept these headings, we have, nevertheless, to recognize that they represent different levels of difficulty for the conscientious and enquiring scholar. The easiest would at first sight seem to be the physical environment undisturbed by the complexities of human activity, characterized, as this is, by both wisdom and folly. But the problem here is to reconstruct a landscape which has disappeared, for since man first discovered how to make use of fire the physical environment has never been free from his interference. Nowhere in the inhabited world of today is there an undisturbed natural landscape. The Dibbin forest south of Ajlun cannot be described as 'virgin forest.' According to Karl Butzer, 'Even apparently intact profiles of *terra rossas* appear to be relict, and no longer developing today.' They were last formed on a large scale during the early Upper Pleistocene, more than 70,000 years ago⁶.

The impact of human beings on the environment has, of course, been constantly increasing, but not steadily. There have been at least nine periods of rather sudden increase:

- i) The discovery of the use of fire, perhaps about 60,000 years ago.
- ii) The beginning of manufactured tools. Even with stone

⁵ Tuan, Yi-Fu, *Space and Place: The Perspective of Experience*. Minneapolis: University of Minnesota Press, 1977. p. 59.

⁶ Butzer, Karl W., 'Accelerated Soil Erosion: A Problem of Man-Land Relationships,' (Ian R. Manners and Marvin W. Mikesell, eds. *Perspectives on Environment*. Washington: Association of American Geographers, 1974. p. 67.)

axes men could cut down mature trees, as has been demonstrated in Denmark⁷.

- iii) The beginnings of agriculture and pastoralism. Of the latter F. F. Darling has written, 'It may be said in general that man's ecological domination by pastoralism of domesticated animals has resulted in marked deterioration of habitat. Vegetational climaxes have been broken insidiously rather than by some grand traumatic act, and just as cultivation of food plants involves setting back ecological succession to a primary stage, pastoralism deflects succession to the xeric [arid], a profound and dangerous stage⁸'.
- iv) The invention of bronze tools. As is certainly well known to you, evidence from Jericho and Tell el-Farah strongly suggest increased deforestation at the end of the Early Bronze, c. 2600 BC⁹.
- v) The introduction of iron tools, about 1000 BC in this area, which coincided here with new political structures, with their greater military and constructional requirements.
- vi) The development of large cities in the Hellenistic period, with their much greater demand for massive building stone and for timber.
- vii) The establishment of the Roman empire, with its road system, aqueducts, gigantic expansion of trade, both within and far beyond the imperial boundaries, its political machinery, its fascinating interchange of ideas.
- viii) The industrial revolution.
- ix) The mid-20th century technological revolution, with its bulldozers, chain saws, massive agricultural machinery, new pesticides, new strains of edible plants, and, of course, new techniques for killing men and animals.

Despite all this it is essential that we at least attempt this reconstruction of the undisturbed environment, for the less we know about it, about its geomorphology and its fauna and flora, the less able we shall be to answer questions under the other headings.

It is somewhat easier to reconstruct a picture of the cultural environment, for in excavating any site one is always examining the results of human activity—buildings, wells, cisterns, dams, weapons, ceramics, coins, human and animal bones, etc. We are on surer ground here.

But certainly most difficult of all are questions under the last three headings. The interaction between human beings and their environment, what they did to the earth under their feet, to the vegetation surrounding them, and to the animals which lived amidst that vegetation, and also what the natural

world did in response, washing the soil from their fields or feeding them plentifully, enriching them with gold and silver or causing them to die of famine—all this depended in the first place on how men and women perceived the natural world, and later how they perceived the cultural environment which they had inherited, or perhaps invaded and occupied. But this is exactly what we can never really know. We cannot see with their eyes or pose to ourselves questions which came to their minds. It is a well-known truth of the modern world that people of one culture literally do not see what is so evident to people of another culture. How much more difficult of all when we penetrate into the pre-literate realm. What did the pre-pottery Neolithic people *think* when they came in sight of the massive defenses of Jericho? It is for us an unanswerable question, though future discoveries may bring us closer to an answer.

Our best guide to the perceptions of people now long gone, especially when we have no written material to aid us, is to make a careful study of what they did in a particular environment, what kind of crops they cultivated, what animals they reared and what they hunted, what buildings they erected, and so on. This certainly throws light on the options they perceived and adopted, but it gives little or no hint about whether there were any options which they perceived and rejected. Ancient damage to the physical environment may, of course, indicate deliberate exploitation based on misconceptions or inadequate understanding of its nature, just as modern damage indicates how we have failed to comprehend the environmental complexities.

If we turn again to pre-pottery Neolithic Jericho, we can at least make some reasonable speculations about how the inhabitants perceived this alluvial fan, with its adequate, and manageable, water supply, but we really need more evidence than we have at the moment if we are to reconstruct the physical environment of the Ghor at that period. We certainly need more evidence if we are to offer anything more than a hesitant and speculative suggestion about what stimulated the building of such impressive, and at present quite unparalleled, defenses. It would seem that there ought to be, or at the least to have been, somewhere on the eastern piedmont some site which would connect Jericho with 'Ain Ghazzal near Amman. Unfortunately, since the rainfall is much greater on the eastern scarp, and the danger of torrential flooding consequently more serious, it is entirely possible that such a site has been completely destroyed. It does not follow, of course, that the people who lived in this hypothetical settlement would have been hostile to the people of Jericho, but it is certainly intriguing that Jericho should provide us at such an early date with what Yi-Fu Tuan has well described as a 'landscape of fear¹⁰,' a phenomenon which does not at present seem to characterize other sites of the same period.

Another site which well illustrates the difficulties of reconstructing ancient perceptions is Jawa. We do not know where

⁷Goudie, Andrew, *The Human Impact: Man's Role in Environmental Change*. Cambridge, Mass.: The MIT Press, 1981. p. 54.

⁸Darling, F. F., 'Man's ecological dominance through domesticated animals on wild land.' (W. L. Thomas, ed., *Man's Role in Changing the Face of the Earth*. Chicago: University of Chicago Press, 1956, pp. 780-781). Quoted by Goudie, *op. cit.*, p. 35.

⁹Kenyon Kathleen M., *Archaeology in the Holy Land*. New York: Frederick A. Praeger, 1960. pp. 130-134.

¹⁰Tuan, Yi-Fu, *Landscapes of Fear*. Minneapolis: University of Minnesota Press, 1979.

the inhabitants came from, why they came, why they chose this particular site, and why the settlement lasted for such a remarkably short time. We can speculate, of course, but we can do no more than speculate. Further excavation would certainly suggest some possible answers and eliminate others, but some perceptions will remain beyond recovery. Obviously, the inhabitants perceived the possibilities of water storage in the wadi where they built such an impressive dam, but what earlier knowledge did they have? Beyond doubt, if they had ever seen a furious flash flood in the main wadi, they would have recognized the impossibility of trying to control it. But did they have previous experience which taught them to perceive the wadi in this manner? Did they see a flash flood here and realize its terrifying power? Did they have perhaps some completely other reason? I do not see how we can ever know.

The basalt region also illustrates other problems of environmental perception. The land use seems to have varied over the centuries. We today perceive it as a barrier to movement (though I know of no evidence that it was seen in this way by Westerners until the 1950s) and there is no doubt that it has served as such a barrier throughout the centuries. The major lines of movement have been deflected around it. But it has also been perceived, especially further north in the Jebel Druze and the Leja, as a refuge by those who dwelt there, and, by frustrated governments, as a dangerous hide-out for rebels. It has in times past, at least in some areas, been seen as a place to herd and hunt animals. The 'kites' evidently played an important role here. But they themselves raise a curious matter of perception. It has rightly been pointed out by more than one scholar that landscape cannot be understood merely from ground-level. It must be seen from above. The kites are for modern observers exceedingly difficult to discern on the ground, but easily visible from a helicopter (this was well illustrated at the Oxford Conference). But these ancient people who planned and constructed them seem, as it were, to have been able to conceive them from an aerial point of view without ever having seen them in this manner. An excellent parallel is the great series of 'earth pictures' which are to be found in the Nazca area of southern Peru¹¹. We must surely therefore recognize that ancient peoples may have been as sophisticated in the realm of imagination and perception as we now know them to have been in technology and social organization¹².

The concept of environment as process is particularly applicable to the country of Jordan, for two reasons: (a) It lies

in a marginal area where the desert and the cultivated land merge into each other, and where three of the world's major vegetation regions come together, the *Mediterranean*, the *Saharo-Sindian*, and the *Irano-Turanian*. There is therefore a continuous interplay and a recognizable advance and withdrawal of the cultivated land. (b) It also forms part of the narrow zone of movement which connects the great landmass of Eurasia with that of Africa. Movement to and fro upon this bridge seems to have been incessant from an extremely early period, but because of the terrain and the limited availability of water these movements have followed well defined roads. Consequently, the roads themselves take on the character of 'place,' by which I mean that the environment has often been perceived from the point of view of people traveling along these roads, pilgrims, merchants and warriors, which is to say *people in motion*, and people in motion result inevitably in ideas and techniques in motion, as well as an interchange of products and artifacts. That pre-pottery Jericho should have revealed obsidian from central Anatolia and cowrie shells from the Red Sea is evidence that what Saarinen has called the 'operational environment' has been for Jordan startlingly large ever since the earliest settlements.

That roads should in this manner constitute 'place' no less than settlements raises some interesting perceptual questions. We need to ask what people perceived when they looked *at* the roads, as well as what they perceived *from* them, and what interplay there was between these two sets of perceptions. The Mesha stele, for instance, suggests a somewhat complex view of the King's Highway: as a line of military advance, certainly, but also from the road itself as a point of departure for attacking neighboring settlements, and thirdly as an essential unifying factor of Moabite territory, for there was apparently no attempt to capture settlements at a great distance from the road.

And while we are on the subject of roads, one of the most elusive aspects of perception is that of the relationship between space, time and distance. We do not understand at all the mind of earlier generations if we do not perceive that relationship in their terms, but the speed of modern transport has set a huge barrier between their thinking and our own. I find that a large number of my students cannot grasp this. They cannot begin to think of the distance between Amman and Jerusalem as being three, or perhaps four, days' journey. There is, as far as I know, no way of crossing this barrier except by shunning modern transport. It seems to me an altogether necessary part of geographical and historical research that one should walk, or go by horse or camel, for long distances, sometimes for several days at a time. This may sound like severe medicine, but we need quite desperately to divest ourselves of modern conceptions, particularly in a country where movement to and fro has played such an important part in the process of environment. For this reason I would urge upon those who plan for the future the importance of preserving ancient tracks for the use of modern backpackers.

¹¹ I am grateful to Dr A. D. Tushingham for calling this parallel to my attention.

¹² Dr Roger Boraas, in a personal communication, rightly entered this *caveat*: 'I wonder if the task you have set to recover the 'perceived' levels of the ancients' awareness of their environment is even possible. I think the archaeologist, at least, is limited to those expressions of the ancients which reflect their perception of their environments and the interactions among them in some *durable* physical form. I suspect that they did not always put such reflections of their perceptions in such forms, any more than we do. I don't want us to be off the hook by saying it should not be attempted. I am, however, sadly skeptical that it can be done often or well, given the paucity of evidence and the survival rate of the data which might originally have been produced. It surely leaves me with the sense that we are just at the beginning of this sort of exploration effort.'

The process of the Jordanian environment is complex, for reasons that are both geographical and historical. There are, admittedly, four easily recognizable natural regions: the Western Highlands, the Rift Valley, the Settled Plateau, and the Eastern Desert, but each of these within itself is diverse. For the whole length of the Rift Valley there are important differences between the western and the eastern piedmonts, of which detailed study still needs to be made. In the river Jordan section we have to distinguish the sub-regions of the Qattara and the Zor within the Ghor, and also the difference between the areas north and south of what I have elsewhere called the 'Jordan Waist,' i.e. the point just north of the Zerqa-Jordan confluence, where the scarps on either side come close together. The Dead Sea and its immediate neighbourhood form a distinct sub-region, and the Arabah to the south is far more complicated than would appear at first sight. The same could be said of the other three natural regions.

Because of the marginal nature of Jordan's position particular attention needs to be paid to the question of micro-environments. Here

along the Strip of Herbage strown,
that just divides the desert from the sown¹³,

every slope, however modest, can affect both the rainfall and the speed of evaporation. It is easy to see that the northern and western slopes of a tell are always greener in winter than the southern and eastern, and Dr Scott Rolston pointed out to me, what I later confirmed from my own observation, that the very slight change in slope at the sixth circle in Amman marks a minor climatic divide: the rainfall to the east of it is less than the rainfall to the west. We must expect, therefore, local land use to be affected by such variation, erosion to be modified, flora to be perhaps somewhat different. I would therefore urge archaeologists, when they excavate a site, to make as detailed a study as possible of the immediate environment as well as examining the general environment of the area. I know that this has been done, for example, in the Bab edh-Dhra' and Madeba regions. I am here only pleading that it should always be done.

For the physical environment of Jordan, I am glad to say that a great deal of information is gradually being amassed. On a large scale we have, for instance, the excellent and detailed new geological maps, and on a smaller scale we have such studies as those made in connection with the King Talal Dam. But more remains to be done. We very much need a climatic atlas. The Rainfall Atlas of 'Ali Shalash has, alas, been rendered out of date by the mass of new information acquired since it was published¹⁴. But this physical environment is, of course, a disturbed and culturalized environment. Human beings, with their ploughs and hoes, their axes and their carpenter's tools, have brought about changes every-

where. Even their feet, as they walked from one village to another, have interrupted natural growth and have pressed down and compacted the soil. What we have to try to construct, therefore, for Jordan is a series of pictures of the culturalized landscape in different periods, remembering that the environment was always in process of change, whereas pictures are static. They are no more than single frames taken from a moving film.

The perceived environment, with its possibilities, its difficulties, and its dangers, becomes, of course, easier to recover when there is documentary evidence. But for the greater part of Jordan we lack this evidence for much of the historical period. Certainly for the iron age we have a wealth of information in the books of the Old Testament, but we have to be very cautious how we use this information. The great majority of it reflects the thinking of people in Jerusalem, some of it the thinking of agricultural villages on the West Bank, or perhaps a mixed economy of agriculture and animals. Only a very little, and that from the earliest period, reveals the thinking of pastoralists, even though these must have lived in a symbiotic relationship with the settled communities. That the inhabitants of these settled communities perceived the forests and the deserts as 'landscapes of fear,' trackless, the home of wild beasts and unnamed terrors, is beyond question, but we must be exceedingly cautious about transferring these perceptions east of the Jordan. The fears existed, certainly, for the relationship of settled farmers to nomadic and semi-nomadic herdsmen is seldom an easy one, even though they may depend upon each other. It is very possible that the ancient village dwellers of the Ajlun highlands may have shared some of the fears of the people west of the Jordan. Also, when I first knew Madeba many houses had battlements and people used to tell me how, only a short time before, they had lived in fear of Bedouin raids on their fields. But the further south one proceeds, the less true it must have been. Villagers who took their flocks and herds far out into the eastern desert cannot have thought of it as a trackless wilderness, and still less can this have been the perception of the traders of Edom.

The whole Edomite region cries out for more thorough study, both geographical and historical. It is so evidently, even to the casual visitor, a region with its own distinct character, a narrow line of villages perched just below the rim of the plateau, here at by far its greatest height. It could properly be described as unique, with no exact parallel anywhere in the Middle East. I am not speaking only of Petra when I use this word 'unique,' but of the whole region south of the Wadi el-Hasa as far as Ras en-Naqb. It has clearly its own complex climatic pattern, which needs to be studied in detail over the years, and I would suggest that very probably each village, being somewhat isolated, has its own micro-climate and therefore its own micro-environment. We also need to discover as much as we can about the now vanished woodlands, and about the relationship between the settlements along the plateau edge and the Arabah. We certainly need to know

¹³ *Rubaiyat of Omar Khayyam*, X. Translated by Edward Fitzgerald, second edition.

¹⁴ Col Ra'fat Majali, Director of the National Geographical Centre in Amman, has since told me that a new climatic atlas is in process of production. This is excellent news.

more about the ancient copper mines and whether their use parallels in date that of the mines on the western side of the Arabah, as some have asserted, though as yet without the necessary evidence. While there are still memories to be tapped, we need to collect information about traditional village life—I have in mind, for instance, a village such as Dana, with its interesting circular arrangement of houses. We also need to know about the patterns of transhumance, which seem to have been surprisingly extensive. We certainly need to know far more than as yet we do about the Edomite kingdom itself, especially as the information from recent excavations is so tantalizing.

Another, and final, aspect of perception which I have not yet mentioned is that of the newcomers in times both of peace and war: warriors, immigrants, merchants and pilgrims. They have all brought with them pre-conceived ideas and have looked at the land with foreign eyes. What kind of landscape was there for them to see, and how did they perceive it? It is evident that the Romans saw the eastern desert as a frontier zone with beyond it a dangerous enemy, and they built forts to delimit and control this frontier. But the Umayyad rulers viewed it quite differently and saw no need for fortification. Their takeover had been remarkably peaceful and the so-called 'desert castles' suggest that they regarded the *bādiyah* as a medium of trade, and of access to the *haramain*, as an area where it would be profitable to maintain harmonious

relations with the Bedouin, and as a place of pleasure, especially the pleasures of the chase, perhaps also as a place where the true life could be lived, though this has been strongly questioned in recent years.

Nearer our own time, descriptions of Palestine by Westerners in the Ottoman period, and photographs when photography became possible, are much more numerous than they are for the territory east of the Jordan. Nevertheless, they do exist for this region also and they urgently require collection and study. The descriptions are certainly somewhat prejudiced and the photographs occasionally contrived, but they remain, nevertheless, an important source of information. A small example of this is J. W. McGarvey, who visited the country in the late 1870s. He speaks of his surprise at seeing a great quantity of fish in the river Zerqa at Amman, only two kilometres from its source, and he says that they were 'so thick as almost to touch one another'¹⁵.

The exhibition of photographs of 'Jordan in the Old Days' at the Ashmolean Museum during the Oxford Conference was fascinating, and I understand that steps are being taken to build up a collection in Jordan. I wish the organizers of this project every success, because we need as much information of this kind as possible.

¹⁵ McGarvey, J. W., *Lands of the Bible: A Geographical and Topographical Description of Palestine, with Letters of Travel in Egypt, Syria, Asia Minor, and Greece*. Philadelphia: J. B. Lippincott & Co., 1881. pp. 43 and 477.