

Jens Kleb, Erfurt/Germany
11th of March 2022

Dear Ms. Francesca Mazzilli, dear Mr. Rocco Palermo, Dear Mr. Luc Doyon

Given the current events in the world and the countless suffering, it is difficult to focus on other things and their importance. However, I used the sleepless nights and restless days to implement your important comments and also justified criticism in my work. The critical remarks made by Ms. Mazzilli particularly triggered me, because as a surveyor I felt particularly caught by this. (but also often rightly so, I would like to say. ;-)

I completely revised the research-paper and so many sentences and paragraphs were changed and optimized that the change tracking in MS Word after a short time only displayed a red markup bar on the left in a vertical ongoing line. Due to the restructuring, new versioning and addition, the footnotes have changed. Therefore, I had unfortunately to deactivate these change tracking in MS Word so that the footnotes were rearranged and updated again! Sorry for that.

Perhaps, I need to make a few comments in advance of the answers in order to answer some of the questions raised.

I have been interested in the archaeological sites of southern Syria and northern Jordan for almost 20 years. In doing so, one notices numerous inconsistencies, especially when one travels the landscape as a multidisciplinary surveyor and also reads of literature of the first European and American travelers from the 18th and 19th century.

The methodology from the beginning of historic geographic archaeology simply consisted in the fact that, each author took as many biblical and also Greek/Roman places as possible for his book and his area under consideration.

The similarity in name was the decisive fact, even without checking with ancient literature or even archaeological evidence. That is why some places existed several times in different areas, which led to various scientific disputes.

Sometimes the assumptions were correct, sometimes immediately demonstrably wrong, but many remained in the status of "conjecture".

From about 1950 this methodology came to an end, but unfortunately very often the now "old" and "renowned" literature with its assumptions was considered binding and eternal reference adopted several times. This is partly understandable, since many of the locations described no longer exist physically. However, it is always worth questioning such "locations".

In the course of my research work, I was often in contact with associations and professors who were interested. However, they always pointed out that if a previous location was "up for discussion", a detailed and dedicated analysis, point by point, would be necessary. Otherwise, the scientific/archaeological world would not recognize or tolerate any of such new theses, even if this new location are valid and highly plausible.

Because the world's leading archaeological databases and mapping projects are in the UK, Sweden and the USA, a publication in English was a matter of course for me, but for the sake of completeness, I have adhered to these instructions from 'German archaeology'. Therefore, I am aware that some sections of chapters 2, 3 and even 4 are very detailed, but these explanations leave no room for interpretation or give reason to reject the new location, since all sides have been illuminated, before.

So, I apologize for the extent of the elaborations, but I believe that the tightening and restructuring of the chapters can now clearly show and illustrate how such errors arise or arose in the first place.

After 15 years of geographical/historical analysis of these areas, I fully understand how difficult it is for an outsider, albeit very knowledgeable in this area, to read. However, I can assure you that I am at your disposal for any question of this kind, gladly and competently.

Now to the notes of your review in detail and the changes / improvements that have been made.

At first, answers to Mrs. Mazzilli's review (14.Feb.2022):

Of course, you are right that, at the current state of research, there is no final proof of the build/time of use for Ar-Rafi'ah, but I hope very much that this will be possible at some point. However, in the work I have given further analogies in the construction with references in southern Jordan and in Israel. Any further "Dating-Questions" at this time, can only be answered by these analogies, but they build the base for future real research at the Ruins.

I also hope that, the revised chapter 2 can show a plausible reason for the unusual accumulation of military buildings. Since there is no suggested Location in the scientific literature, for this necessary military security of the borders with many soldiers, the parallel to Raeptha /Raphana would also suggest itself here.

Further, I have tried my best, to improve the formulation, which sometimes resulted from the too direct translation from German. This, of course, includes the title. However, as a crucial point after streamlining, optimizing the text and also '*italic*' marking of location Names, I added attachments to the work. These include a completely new map with all the locations mentioned in the work (Supplement B), a table with the exact coordinates of these locations (Supplement A) even in several coordinate systems ;-)) Lastly, the illustrations used in the work in a higher resolution some enriched with additional information (Supplement C).

The previously mentioned translation from German, which was sometimes too direct, led to a misunderstanding of the "new methodological approach". In fact, it is a plausible relocation proposal, for the last yet unidentified Decapolis city according to Pliny's description. This site, by the using of Satellite/aerial imagery verified as significant and important, due to its characteristics documented here for the first time, could only be examined in detail with the help of the new free image databases due to the situation in Syria. Therefore, there is within this paper certainly a new methodology as well, but this was already described as trend-setting for the future a decade ago, as now new included in subchapter 1.1, by an excerpt of Prof. em. David Leslie Kennedy.

Certainly, the paper could also be split into three, 1st: Chapter 2 ; 2nd: Chapter 3 with 4 together and finally as the 3rd: chapter 5.

Thanks to your advice, I have structured the content in such a way that it is hopefully now easier to read and to understand. Now these potential Parts (1st) and (2nd) independently of another results in the same question: "Where can the real Raphana have been located?"

I hope this makes the large scope more interesting for potential readers, especially since an interested reader now can read individual chapters depending on the own research specifics. (history / first archaeological landscape descriptions and maps / modern possibilities of aerial/spatial- archaeology)

I have also implemented your comments on the references and illustrations. Other thoughts was taken into account by "Supplements A, B and C" as described.

Lastly and already transitioning to the review by Mr. Palermo, I would like to add something on the subject of "Databases / Imagery".

The resolutions of the additional databases mentioned don't reach them of the modern Maxar / Google-earth technologies. The Sentinel Satellites of the 60th and the several Landsat's and Corona Satellites including LS 8 between the late 60th and 70th can't provide further information's because of the resolution. (normally by 1,80m/pxl) Even the highest by Landsat 8 has just 60cm/pxl, the commercial but free available Google earth up to 15cm/ pxl. This is between 144 or at minimum 16 times higher resolution than the other is.

As a registered user of the USGS since 2007, I have tried and worked with several resources and a great amount of Gigabyte downloaded satellite imagery Data, but unfortunately I can't find better and even combined with Digital elevation Data combined, satellite Images. This is underlined by the work of D. L. Kennedy already mentioned.

If one are looking for old Streets, channels, aqueducts as I have done this, these sources are very helpful, for a relatively small area of interest (like the auxiliary forts or the Qanat construction shafts), it does not provide more details than the newer ones. I have already registered me at the EAMENA/MarEA Database, I will further looking for the content and hopefully, the database will provide further worthfull images.

As a volunteer Member of the 'Syrian heritage archive project', I'm direct connected with the Database to edit the images by myself. This has at this moment, more than 120000 images of the Syrian (archaeological) heritage, but there is unfortunately not one, of the Bir Qassab / Ar-Rafi'ah Area.

Because, both of you has made comments on image resources were important and good, I've mostly incorporated what's written here in the paragraph above into the beginning of Chapter 5, as it may be of general interest. (I left out some not-so-important things, as you can see from the shrinked text) So thanks again for the tip.

Answers to Mr. Palermo's review (04.March 2022):

Many of the issues addressed at your review, have already been addressed and taken into account in my responses to your colleague Ms. Mazzilli's contribution. That is the only reason why this answer can be shorter than the other one.

I hope that you also recognize the now clearer structuring and the revision. I continued to pursue the thematic 3-division, which you also mention in your first paragraph, and implemented it, as already above explained.

The time-consuming creation of the data tables and the map, which is certainly necessary step for further explanation and traceability, was an important part of the work, which was still missing.

With this and other changes, I in addition follow your explanations. Therefore, this work offers in its individual parts, the starting point for further similar work by me, but also by researchers who deal with similar topics.

I would also like to take this opportunity to thank you for your recognition. On the field of historical geography (especially in this region), ancient used technologies and together with the simultaneous use of modern techniques of surveying and photogrammetry, I have been worked now for many years.

I am convinced that this is an extremely important branch of archaeology, but it is not always given the same importance by everyone.

The combination of modern research options, old literature, aerial and satellite archaeology, surveying and pure practical archaeology can generate a wealth of knowledge that cannot be provided by even the most meticulous excavations on site and within the excavation-square alone.

The positions and direction of roads, paths, watercourses and natural borderlines are nearly the same over many centuries or millennia too. Bridges, fords, Mountain-ridges and -passes, mostly fixed these in her line.

Trade relations and military campaigns were led on them. The knowing of these infrastructure, provide us additional information's to the large-scale connections between the small found sherd within the excavation square and the potter's workshop far away where it was once created.

with many thanks for your efforts , Jens Kleb