

THE FRANKINCENSE ROAD FROM NAJRĀN TO MA^cĀN: A HYPOTHETICAL ITINERARY

ALESSANDRO DE MAIGRET

Quite ironically, frankincense caravan routes are hardly mentioned in South Arabian texts. However, if one reads those texts, he feels that everything in the ancient kingdoms of Southern Arabia – from economy to social life to political events – pivots around and stems from the basic reality represented by that steady, distinctive flux of wealth. It almost sounds, as if South Arabians took the fact for granted.

Barring some rare oblique references, i.e. the dedication of Minaean merchants at Barāqish (Robin 1991: 59 ff.) or the stele in the market place of Timna^c (Beeston 1959), explicit sources are all from outside. The most interesting one is the text in Assyrian language by a king of Sukhu on Middle Euphrates, who seized a caravan of 200 camels loaded with purple dyed wool, iron and alabaster (Cavigneaux-Ismaïl 1990: 351). The text dates back to the 8th century B.C., and proves how ancient the trade route from South Arabia is (in this specific case, the caravan caught at Sukhu had passed through Taymā³ and, probably, through Dūmat al-Jandal). If one follows M. Liverani, however, he can imagine the road to be even more ancient, considering the type of carried goods which can be found in the kingdoms of Middle Euphrates as early as the beginning of the 9th century B.C. (Liverani 1992: 112 ff.). Inter alia, this is another evidence of how ancient the kingdoms of South Arabia are, and validates the data which have been resulting from recent excavations in Yemen.

The best known sources are obviously represented by

classical authors. The first author to make references to frankincense transport is Erathostenes of Cyrene (225-195 B.C.). As quoted by Strabo, he states that «traders travel from Aelana to Minaea in 70 days» (Strabo, 16, 1, 11). Agatharchides of Cnidus (c. 132 B.C.) makes an interesting remark: «Those (that is, Arabian peoples) who live nearby, receive a steady flux of loads of aromatics and deliver them to their nearest neighbours as far as Syria and Mesopotamia» (Strabo, 16, 4, 19). Pliny the Elder says that frankincense is carried from Sabota (Shabwa) to the territory of Gebbanites, and then from Tomna (Timna^o), their capital city, as far as Gaza in 65 stages (Pliny, XII, 32: 63-65). He adds that «Minaeans, whose land is crossed by a narrow frankincense road, are the people who started the trade and mainly practice it. After them, the perfume has been termed Minaean» (Pliny, XII, 30: 54). Pliny also lists 28 peoples and towns from the border with the Nabataeans to Yemen (Pliny, VI, 157-158). It has been assumed that the order in the name list could hint at the itinerary of the frankincense road from north to south. H. von Wissmann has consequently tried to identify the names, with doubtful results though (Potts 1988: 133, Appendix B). Finally we have the catalogue of geographical names by Claudius Ptolemaeus (c. 150 A.D.), which are the only real topographical elements as for inland Arabia of classical period. Locating the places is rather difficult though, given that the data for longitude are not precise. The most authoritative attempt of reconstructing Ptolemy's map of Arabia is still A. Sprenger's one in 1875.

As we have seen, the data on the frankincense route derived from classical sources are scarce and hazy. Studies and field researches, which have taken place mainly in Yemen, have broaden our knowledge of the ancient road, in particular of the leg which led from Bīr °Alī (old Qana) apart from a couple of more difficult alternatives – to Shabwa, the capital of the kingdom of Ḥaḍramawt. From there, passing through the capital cities of the kingdom of Qatabān, of Saba^o and of Ma'in (Timna^o, Mārib and Qarnāw respectively) it reached Najrān, beyond the northern border of today's Yemen (Groom 1981: 165 ff). From there to Petra (or to Ma'an, after the fall of Nabataean kingdom) the route, though relatively very long, has never been either specified by classical

sources or reconstructed on location by modern scholars (Najrān to al-Madinah leg in particular).

This communication will approach the issue. We will try to establish a geographical basis for the caravan route starting from Najrān.

From Najrān to Bīshah (map 1)

Having reached Najran from Maʿīn, by-passing Jabal al-Lawdh and the mountains of Khabb, the caravan route went on northwards skirting the desertic plains (between 1,000 and 1,250 ms above sea level) under the lee of the reliefs of ʿAsīr. It is the geological area connecting the «Arabian Shield», the mountainous region made up of Precambrian crystalline rocks, and the «Arabian Plateau», the vast tableland of sedimentary rocks which slopes down gently to the Persian Gulf with a series of more and more recent layers (NID 1946: 16 ff.).

The road Yemeni Pilgrims followed to reach Makkah crossed the mountains of ʿAsīr, starting from Ṣaʿdah and passing through Zahrān al-Junūb and Khamīs Mushayṭ (the «Elephant Road» of Abrahā) (Forrer 1942: 321 ff.). In Pre-Islamic times, however, the caravan route had to proceed along this more eastern pre-desertic strip, given that its starting point (Najrān) lied much more to the east (Groom 1981: 193).

From al-Ukhdūd the road turned northwards, leaving wādī Najrān and following the present road approximately. It crossed w. Habawnah, near today's al-Ḥusayniyyah, and then, skirting the steep reliefs of Palaeozoic sandstones of j. al-Qārah to the right, it reached the area of Bīr Ḥimā on a bend of w. Qaṭan.

Both the numerous graffiti and the famous inscription of dhū Nuwās (Ryckmans 1952: 10) to be found on the rocks of j. al-Qārah and j. Kawkab are evidence of the ancient way (Grohmann 1962, map on pl. I). From Bīr Ḥimā, the route went on between the northern off-shoots of j. al-Qārah and the solitary relief of j. Kawkab. The bed of w. Yadmah (called wādī Īdimah in AP and wādī as-Sīlīl in TPC), the richest-in-water *wādī* in the area, was a possible stop. When exactly the road branched off for Qaryat al-Fāw is impossi-

ble to tell, but the fork was likely to be here, after j. Kawkab.

In fact, after w. Yadmah, the caravan met solitary j. al-Wajīd towering over the sedimentary plain. It would naturally split the caravan, sending one part to north-east towards the oases of w. ad-Dawāsir and then towards Aflāj, Yamama and Gerrha, and another part to north-west towards Bīshah. The latter was forced to run along vast j. al-Qahr to the end (it was possible to stop while crossing one of the *widyān* which came from the range, e.g. w. Iharah) and to by-pass it from north, crossing w. Samārah (w. Simārah in TPC). After a stop under the arenaceous pinnacles of j. Khaniq (TPC), the road passed through Bīr Murayghān, where Abrahā carved an inscription while pursuing northern Arabs tribes in 547 A.D. (Ryckmans 1952: 8-9), and finally reached Tathlīth oasis (which can be identified with Ptolemy's Laththa).

With two more stops (maybe by j. al-Ḥaṣir, and in the area of Mithab Ama'd [GM]), crossing a succession of western feeders of w. Tathlīth, one finally reached Bīshah oasis, Ptolemy's ancient Thumala. The identification is confirmed by j. ath-Thamalah, which lies along w. Bishah, north-east of the nearby modern town.

So far the caravan route from Najran had covered about 435 kms in 9 stages (or better travel days).

In addition to the inscriptions and the numerous graffiti, the so-called «non-urban first millennium BC/AD sites» found in the area by the surveys of the Saudi Department of Antiquities and Museums (Zarins *et al.* 1981: 28 ff.) seem to confirm that the road we have described above was the road followed in Pre-Islamic times. And yet, it is interesting to note that both the pottery and the structures which characterize the sites («mounds», «tapered structures» and «troughs» included) pertain to the «Badw», that is the nomads according to J. Zarins. As the research carried out by our Archaeological Mission in Yemen was able to prove, this culture is contemporary with the Bronze Age civilizations of Yemen. However, it lives on as an autonomous entity in South Arabian times, as the excavations we conducted on «turret» tombs at al-Makhdarah, near Ṣirwāḥ, prove (de Maigret 1995). The fact that those «Badwin» ruins can be found both along ancient Yemeni routes (take the famous «pill boxes»

tombs between al-°Abr and j. al-Lawdh, as an example), and along this Saudi route, may lead us to think that the nomads were actually the people in charge of the caravans.

From Bīshah to Makkah (map 2)

Bīshah was also reached by the Islamic Pilgrim route that followed the inland road through Ṣahrān, as we said before. Northbound the routes seem now to merge into one. There seems to be one possible route only, as the massive obstacle of Ḥarrat al-Buqūm/Ḥarrat Nawāṣif can't be bypassed from the east – both because of the barren land and because the itinerary would diverge too much from the line to Makkah – leaving the difficult area between the two large lava fields and Asīr as the only possible way through.

As a consequence, after Thumala next stop was Ptolemy's Tabala. The road however had to pass north of today's Tabālah (NRA), as the area is impassable, and could stop at w. Ranyah, which is also mentioned in the Islamic itinerary. After another stop in the surroundings of Jarab (NRA; near altitude 5004 of TPC), the road was forced to pass on the lava fields of Ḥarrat al Buqūm. But (as one can see in the satellite image on which 1: 500,000 NRA map is based on) it followed a wide sedimentary passage with some wells still in use. Here one stopped at w. Karā (al-Hamdānī, in Forrer 1942: 323), the *wādī* that leads north to Turbah, and (after passing °Aynīn [AP]) he stopped again right at the mouth of the *harrah* at an oasis in w. Turbah, near today's al-°Ulabah (al-°Ilabah of TPC).

Then, by-passing the finger-shaped mountains of this side of Ḥijāz from east, and more or less following the modern road that skirts Ḥarrat Ḥaḍan, the caravan reached the wells of Bīr °Ān (AP) – or Hāthin (NRA) and then °Ukāz, which lies on the same latitude as at-Ṭaif and Makkah. °Ukāz, today called °Ukāz Sūq, was known in the past as an important centre where Pre-Islamic tribes met annually for commercial, political and social purposes, and also for prose and poetry contests (Doughty 1988: II, 535). Numerous ruins, some Islamic, dot the site today (DAM 1975: 29, 34-35).

Makkah, Ptolemy's Macoraba, lies three walking days

away to the west, and it is unthinkable that caravans headed for the Mediterranean deflected so much to reach it. So Makkah bound traders left the main road, and followed the road medieval Pilgrims did, that is passed through Qurn al-Manāzil (today's as-Sayl al-Kabīr, may be Ptolemy's Carna) and az-Zaymah.

From Bishah to ʿUkāz, about 260 kms were thus covered in 6 walking days.

From Makkah to al-Madīnah (map 3)

From ʿUkāz the caravan went on crossing sedimentary plains to reach the wells of w. Sawāmīd (TPC), which is the first eastern feeder of w. al-ʿAqīq. We are about 15 kms north of the modern small town of al ʿUshayrah and at the mouth of the valley of Sahl Rukbah. This is an ample corridor limited to the west by the immense lava tableland of Ḥarrat Rahāt and to the east by the basaltic effusion of Ḥarrat Ḥaḍan (more to the south) and of Ḥarrat Kishb (little more north). Later it will also be used by the Islamic caravans coming from Kūfah in Iraq (Darb Zubaydah). Birkat al Kharābah (Bir al-ʿAqīq of TPC) lies just on the famous Darb Zubaydah.

Both the medieval and the more ancient road probably had the same legs from this point to the basin of Mahd adh-Dhahab, i.e. as far as the northern limit of Sahl Rukbah. Al-Mislah, Khabrat al-Ḥajj (Umm al-Ghirān of TAC), Ḍulayʿ ash-Shaqq (in w. al-Lakhajah [TPC]) and Maʿdin Banī Sulaym (modern Mahd adh-Dhahab), under different names, were probably the stops of the frankincense caravan route, too. According to A. Sprenger, Ptolemy's Baiba should just be situated along this stretch (Potts 1988: 152, Appendix C).

Thus the direction went on straight north as far as Mahd adh-Dhahab, where it bent north-west towards Yathrib bypassing the northern fringe of Ḥarrat Rahāt. The road is not very easy, if one considers the projections of granites and schists. However, the numerous wells first by al-Harrārah (TPC), then in the Qāʿ al-Ḥāqinah (near Shamāl [NRA]), north west of ad-Ḍumayriyyah (TPC) and, finally in the Qāʿ Ḥaḍawḍāʿ (TPC), in the passage-way between Ḥarrat Rahāt and Ḥarrat an-Nāʿimah, confirm the hypothesis of the itiner-

ary. After all, no alternatives are available here. Once he reached the plain crossed today by the road from al-Qaṣīm to al-Madīnah, one had to bend south-west to reach Yathrib, that is he had to go back slightly.

From °Ukāẓ to al-Madīnah about 425 kms were thus covered in 10 days.

From al-Madīnah to al-°Ulā (map 4)

In the region going from Makkah to al-°Ulā, the waters coming down the eastern slope of Hijāz range collect in a north-south long bowl enclosed to the east by al-Najd and j. Shammār plateaus. The valley slopes gently from the aṭ-Ṭaif towards al-Madīnah and from there towards the aḍ-Ḍulay°ah basin, 90 kms west of Khaybar and 120 kms south of al-°Ulā. The waters collect first in w. °Aqīq as far as al-Madīnah, then in w. al-Ḥamḍ as far as aḍ-Ḍulay°ah, where, through w. al-Jizl, the waters from the northern part of the valley, sloping down gently from al-°Ulā area, converge on. From aḍ-Ḍulay°ah basin the waters of the *widyān* flow then towards the Red Sea through a vast fault which breaks Hijāz range from east to west. The name of the watercourse, which flows into the sea by Ras Karkumā, is still w. al-Ḥamḍ.

Let's resume our itinerary. The caravans proceeding from Makkah north bound (like the ones coming from al-°Ulā south bound) followed precisely the wet bottom of this ample valley, following first w. °Aqīq, then, from al-Madīnah, w. al-Ḥamḍ and then, from aḍ-Ḍulay°ah, w. al-Jizl.

Following w. Ḥamḍ, the first stop after Yathrib was probably at Buwāṭ oasis (Buwaṭah in AP), where the homonymic *wādī* meets (TPC). The remains of the Ottoman railway which went from al-Madīnah to Damascus run here by the road, almost as an evidence of the fact that no alternative itineraries are available.

Another stop we could think of is by al-Buwayr station. American archaeologists have found nearby two sites with Nabataean pottery (Ingraham *et al.* 1981: 76). Could Ptolemy's Aluara lie here? The names sound similar. A. Sprenger identified Aluara with the site of Fadak (Pliny's Phodac), which I couldn't find in the available maps though (Sprenger 1875: 230). Should the equation al-Buwair/Aluara be

right, we could then associate Pliny's Phodac (Padakku in Nabonidus inscription of Harrān [Winnett-Reed 1970: 91]) with the rest place of Futuq, which is mentioned by al-Hamdānī as a stop just before Makkah for caravans coming from Yemen (Forrer 1942: 237).

Going further north, another possible stop was by Jadā-^{ah} railway station where w. Sibā joins w. al-Ḥamd, coming from Ḥarrat Khaybar. Next stop was undoubtedly in ad-Ḍulay-^{ah} basin, where lie the fort and the ruins of Umm Darb, which can be equated to medieval dhū-Marwah, maybe Ptolemy's Mochura (Groom 1981: 194). The center was important as it was the starting point for the road that led to the sea, following the valley of w. al-Ḥamd to the west (Ingraham *et al.* 1981: 63). The fact that that road is actually practicable and the probable identification of Karkumā (mouth of the *wādī* in the Red Sea) with Leuke Kome (Groom 1981: 261, note 52) are both conducive to a confirmation of the hypothesis.

W. al-Jizl was left at parallel 26 after a stop by j. Nahr (TPC, AP). From here, the gorge of upper w. al-Jizl looks more difficult indeed for a caravan to follow than the valley of w. Muṭrān which leads to al-Madīnah-Damascus railway track. It is worth pointing out that a site with Nabataean pottery (ʿAyn al-Jadīd) has been found by j. Nahr (Ingraham *et al.* 1981: 76, pl. 65: map 3, site 204-41). After a stop in the *sabkhah* of Umm ʿAyn (TPC), by Sahl al-Muṭrān railway station (AP), the road went probably on with no stops as far as Dedān (today's al-Khuraybah). In the Middle Ages people stopped before, i.e. where today lie the remains of al-Mibyāt, ancient Qurh also called w. al-Qurā by Arabs writers (Nasif 1988: 111 ff., map at p. 154).

Thus Yathrib was about 330 kms far from Dedan. The distance was probably covered in 7 walking days.

From al-ʿUlā to Maʿān (map 5)

With the rise of Nabataean power, Liḥyanite Dedān lost its political and commercial role and Hījra (Madāʾin Ṣāliḥ.; called Egra by Strabo, Pliny and Ptolemy) became the main centre in the valley of w. Dedān (later w. al-Qurā, today w. al-ʿUlā). The fall of Dedān was also caused by the fact that

the caravan route moved eastward from w. Dedān, by-passing the bulk of sandstone mountains which bounds the *wādī*. The new road, called Darb al-Ḥajj in Islamic times (Nasif 1988: 111 ff.), started then at Qurḥ area and led straight to Hijra (see Map 4).

Roughly 15 kms north of Hijra, the road was forced to a twist when reaching the bottleneck called Mabrak an-Nāqah (the modern railway line twists similarly near al-Mazḥam station). It was rather an important point for the ancient trade route as here departed (or converged) the caravan route leading to Taymā° (Thaima), and then, via Dūmat al-Jandal (Dumaitha), to Mesopotamia or, via Ḥā°il (Arre), to the Persian Gulf (at Gerrha). It was also the starting point of a Bedouin route known as Darb al-Bakrah, which crossed Ḥarrat °Uwayriḍ bravely, and which was – at least in relatively recent times – an alternative to classical Darb at-Tabūkiyyah used to reach Syria via Tabuk (Musil 1926: 221). A. Musil adds that from there a road leading to the Red Sea was also available in classical times. His hypothesis was based on the identification of three towns of Ptolemy's map (Gaisa, Soaka and Zugana) with three modern toponyms 'Še°īb Ammu-l-Gejš' on the western edge of Ḥarrat °Uwayriḍ, the oasis of 'aš-Šwāk' by Jabal al-Ghārah (AP) and the headland of 'Duḥkān' or 'Zaḥakān', by Dubā), which are as a matter of fact situated along a latitudinal line towards Mabrak an-Nāqah (Musil 1926: 313). It is an interesting idea as it would make this the road that, going further on along the coast from Zugana (i.e. following the same road as the Egyptian Pilgrims bound to Makkah did «al-Mu°ariqah» as it was called by Arabs writers) reached Aylah (Elana, today's Elath [Strabo: 16: 4, 4]) through Madian (Madiama, today's Mughayr Shu°ayb) and Ḥaql (possibly Ptolemy's Agkale).

Al-°Ulā region was thus a real basic hub for the ancient trade caravan route. A hundreds-year lasting steady succession of rising and falling towns in the region is there to prove it.

After a stop at al-Aqrā° (Ptolemy's Achrua, by al-Muṭal-lā° station), the main caravan route went on northward, skirting Ḥarrat °Uwayriḍ from east and following the same itinerary as Darb at-Tabūkiyyah (and the old railway to Damascus) did.

Possible stops could be the following ones mentioned by the Arab writers later (from ibn Ishāq, to ibn Khurdādhbih, at-Ṭabarī, al-Idrisī, Yāqūt, ibn Baṭṭūṭah, down to Ḥajjī Khalīfah, and further down). Put in order they were: Magharesh az-Zīr (dār al-Ḥamrā), Muḥdatah (al-Muʿazzam), al-Junaynah (Janāyan al-Qāzi), al-Akhḥar (al-Akhḍar), as far as Tabūk.

Tabūk, to be possibly identified with Ptolemy's Thapaua (or Thapaucha) (Musil 1926: 318 ff.), was another important hub of trade. Lying some 30 kms north-west of its basin, the vast remains of Qurayyah (possibly Ptolemy's Ostama), and the presence of Jabal Ramm (Ptolemy's Aramaia?) further up in the same direction would both lead us to suppose that one more road to Elana was here available. Moreover, the possibility of reaching Dūmat al-Jandal straight from Tabūk can't be ruled out.

The legs to reach Maʿān from Tabūk and the legs of the Islamic Pilgrim route could overlap again: al-Ḥazm (ʿArāʾid), dhāt Ḥajj (Ḥajar/Damna), al-Mudawwarah (Surgh, or Suragh), ʿAqabat al-Ḥijāziyyah (Zahr al-ʿAqabah), by Fassūʿah station, and finally Maʿān, which was the finishing post and, after the fall of Petra (and possibly even before its rise), the final fork of the caravans bound to the Mediterranean Sea.

After having covered about 300 kms, one got there from Dedān in some 10 walking days. Then one could either go on northward to Udhrūh (Ptolemy's Adru), Amman and Damascus, or, in three more walking days (some one hundred kms) he could reach Gaza.

* * *

Thus the distance one had to cover to reach Maʿān from Najrān totalled about 1750 kms in some 42 walking days. If we add the distance to reach Najrān from Shabwa (via Timnaʿ-Mārib-Qarnāw) – some 710 kms to be covered in 17-21 days (Groom 1981: 213) – and the one to reach Gaza (100 kms, in 3 days), we reach a total of 2560 kms, to be covered in 62-66 days.

As one can see, we are not far from the figure of 65 stages, that according to Pliny it took to cover the distance between Timnaʿ and Gaza (Pliny: XII, 32: 63-64). In the

stretch we have examined, the average distance covered in a walking day comes to 41.6 kms.

This figure fits into real data well, too. A. Musil, for example, on his way back to Tabūk along the railway track, covered the distance of 42 kms separating w. al-Ḥākah (7 kms south of al-Mu^cazzam) from al-Khamīs in one walking day on 4th July 1910 (Musil 1926: 224-229). The trip lasted 16 hours and 40 minutes altogether (4 a.m. to 8.40 p.m.), but the stops to let the camels water and graze took almost 5 hours, with a remainder of 12 actual walking hours. He thus covered 3.5 kms an hour. Similar data, but also much higher ones (for example for mail camels) can be seen in the survey of the records of the speeds of camel trips in Arabia made by D. Potts (Potts 1988: 155, Appendix E). If one considers all the countless variables that could condition such a long trip (i.e. temperature, available or non-available water and pasture, the changing of mounts, load, tribal problems, and so on), one is bound to think that an average day distance of 40/50 kms corresponds to the one which was actually covered by the ancient frankincense caravans. The fact that the term «walking day» didn't have to coincide with the term «stop», as there could be more than one stop a day, must be taken into account, too. Al-Hamdānī for instance, dealing with the pilgrimage road from Ṣan^cā³ to Makkah, states that it took 22 walking days and 35 stops to cover the distance of 420 miles (Forrer 1942: 321-2). The details of the stops are well embedded in the report of a Yemeni pilgrim met by E. Glaser at Mārib (*ibidem*: 321, note 10).

Furthermore, we don't have to forget that a religious caravan and a trade caravan have two different purposes (at times, a religious caravan had both, though). One should suppose, for instance, that a trade caravan needed to proceed at a higher speed so as to cut down costs. True, the need varied with different historical periods, in relation to market demands, to the protection ensured by the towns they went through, to the amount of transit taxes, to the local and international political situation. Nonetheless, the need of extending the legs so as to be quick was certainly felt. The Koran (Sūrah XXXIV [Sabā³], 18-19) reads: «Between them [Sabaeans] and the cities on which we had poured our blessings, we had placed cities in prominent positions, and between them we had appointed stages of journey in due

proportion: 'Travel therein, secure, by night and by day'. But they said: 'Our Lord! Place longer distances between our journey-stages': but they wronged themselves (therein). At length we made them as a tale (that is told), and we dispersed them all in scattered fragments. Verily in this are signs for every (soul that is) patiently constant and grateful» (transl. by °A. Y. °Alī).

The passage clearly highlights Sabaeans' inclination to extend the legs in order to get more profit by cutting down times and striking out stop expenses, at the cost of increasing risks. We are, however, in the second half of 6th century A.D., when caravans were totally different from ancient ones: cuts to the expenses were probably necessary. After all, Pliny doesn't tell of 65 days from Timna° to Gaza either: he tells of *mansiones camelorum*, that is stops to refresh and possibly change camels.

That's why in our tentative reconstruction we have always made reference to walking days and never to legs. Their number, and their precise location alike, remain hypothetical (except for a few cases). They have been suggested here only to draw an itinerary practically and for the first time. Let us focus on this now, so as further studies and surveys can trace the now blurred lines of this well beaten track of old.

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Maps

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- GM: MINISTRY OF PETROLEUM AND MINERAL RESOURCES, KINGDOM OF SAUDI ARABIA, *Geologic Maps of Saudi Arabia*, 1 : 250,000, Jiddah 1986-9.
- NRA: Z. M. A. FARSI, *The Kingdom of Saudi Arabia National Road Atlas*, 1:1,000,000 and 1:500,000, Jiddah 1994.
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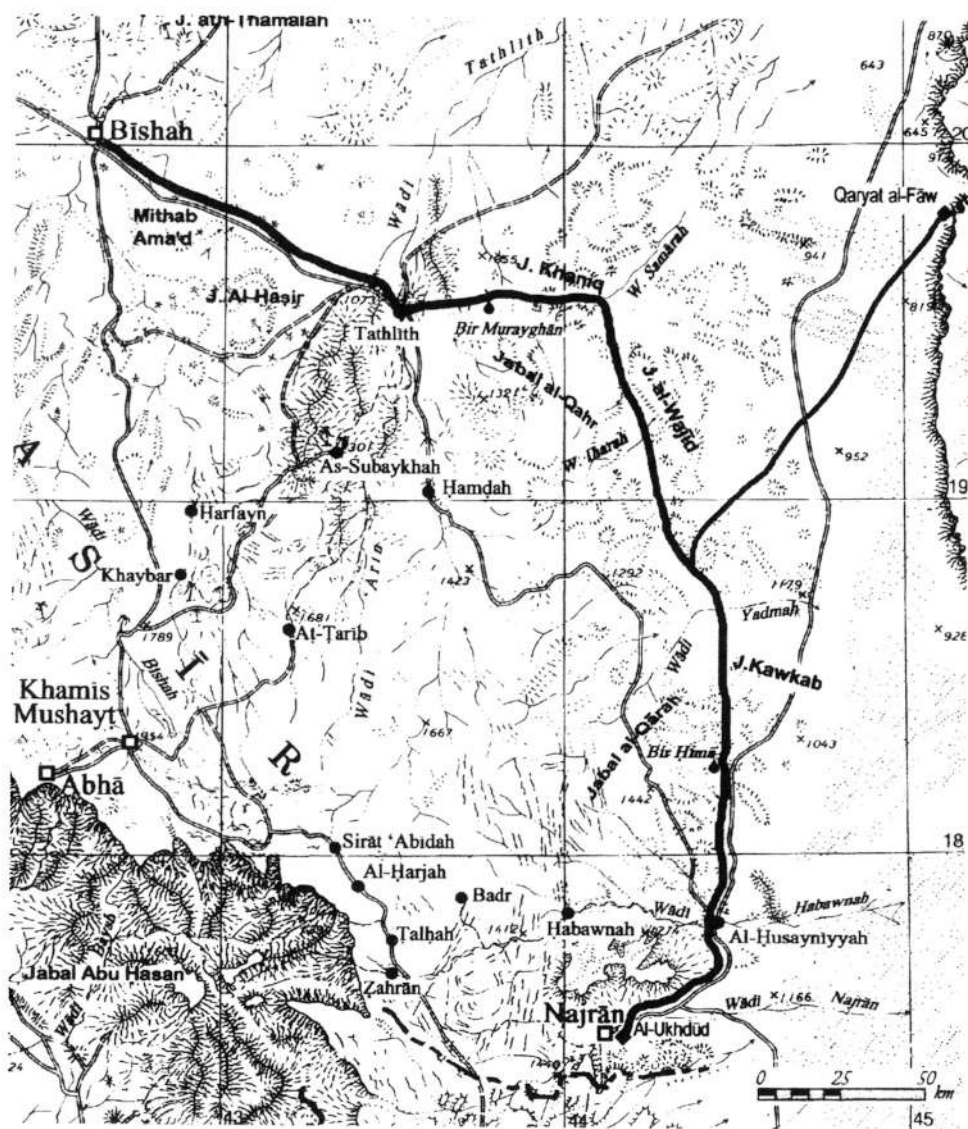


FIG. 1 - The frankincense road from Najrān to Bīshah (map 1).

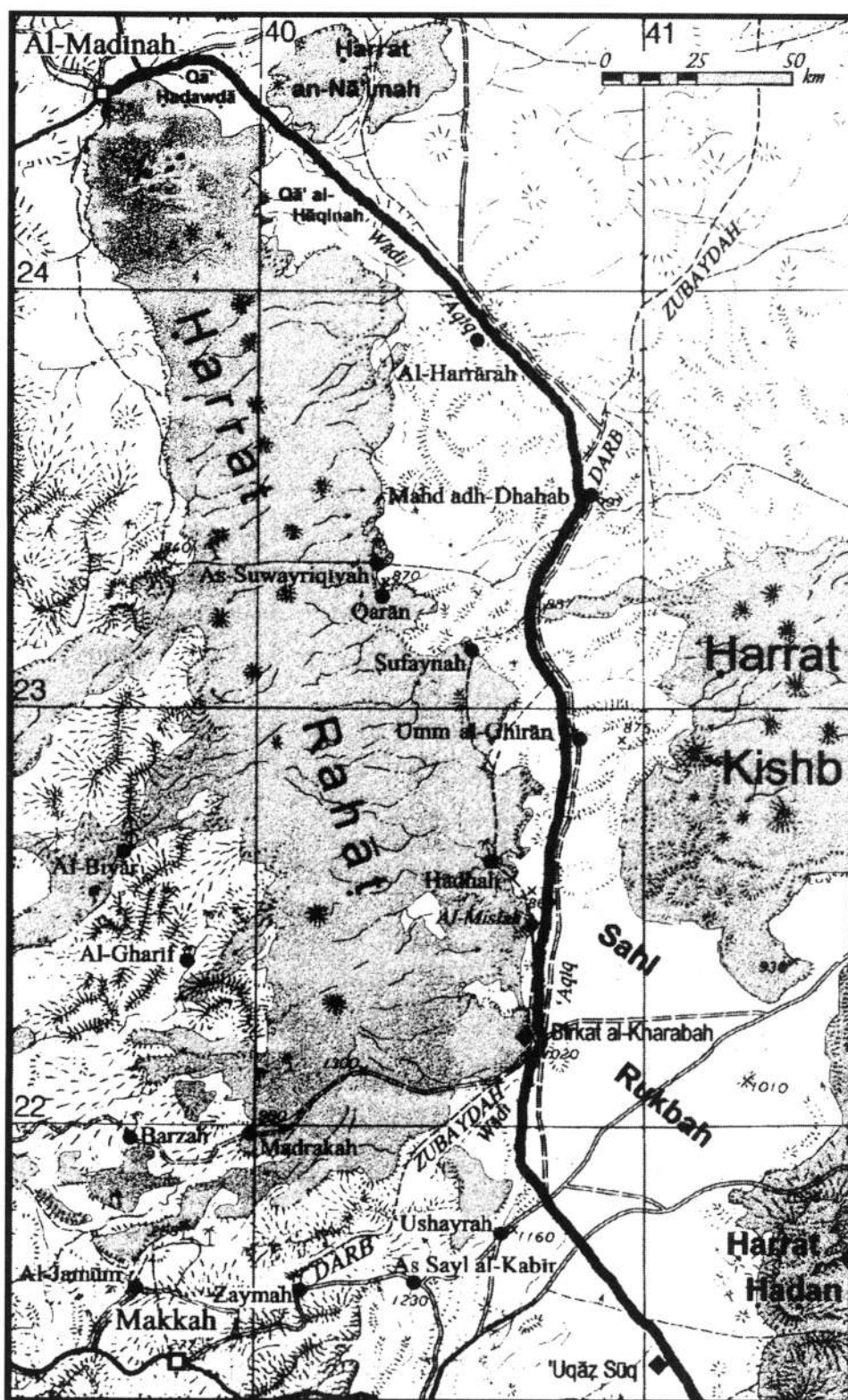


FIG. 3 - The frankincense road from Makkah to al-Madīnah (map 3).

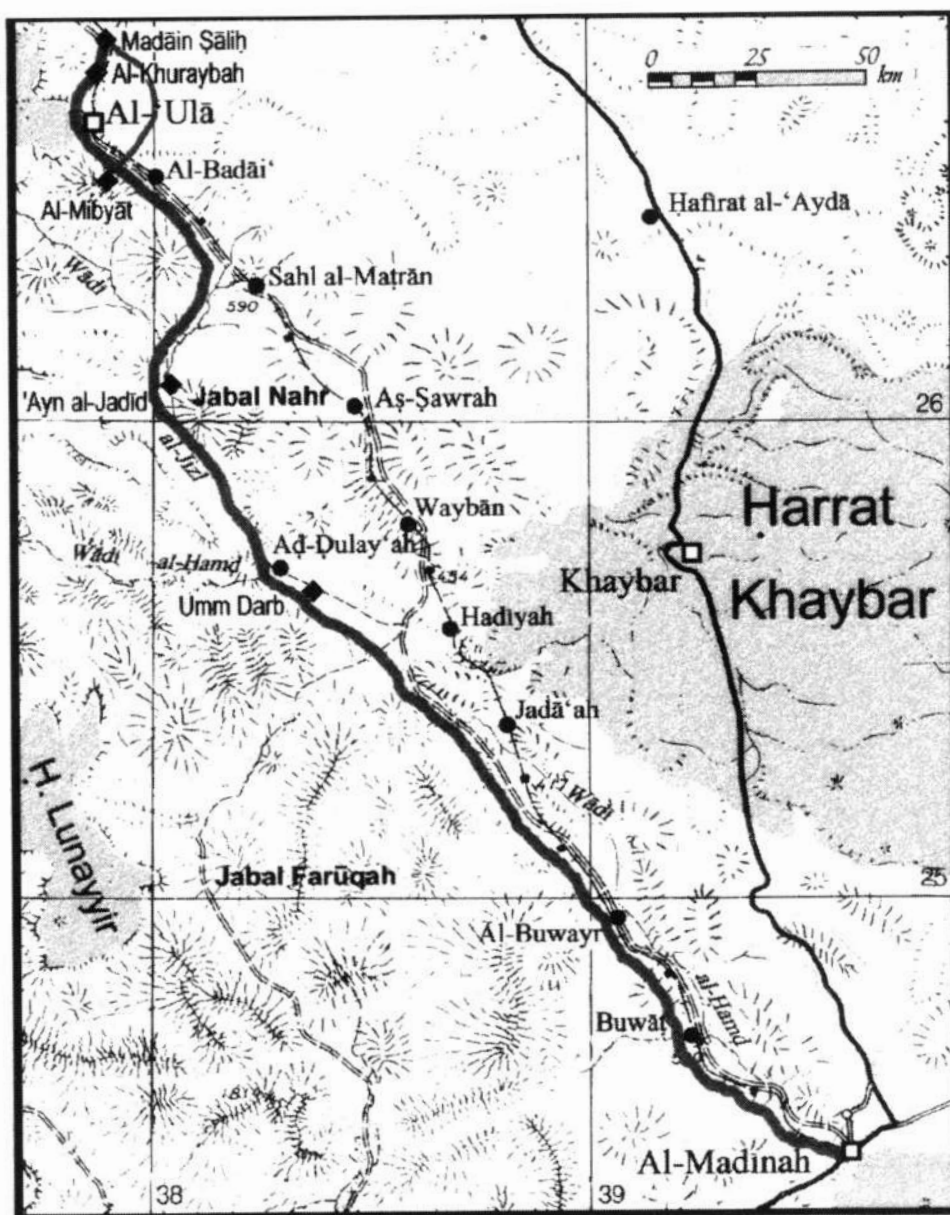


FIG. 4 - The frankincense road from al-Madīnah to al-'Ulā (map 4).

