

powers; and this perpetual struggle with gods and men was not profitless, although the external catastrophe was inevitable. Moab meantime remained settled on his lees, and was not emptied from vessel to vessel (Jer. xlviii. 11), and corruption and decay were the result. This explanation, however, does not carry us far, for other peoples with fortunes as rude as those of Israel have yet failed to attain historical importance, but have simply disappeared. The service the prophets rendered at a critical time, by raising the faith of Israel from the temporal to the eternal sphere, has already been spoken of in the article ISRAEL.

Sources.—The Old Testament (Ruth and Chronicles, however, being of no historical worth in this connexion), and the inscription of Mesha, on the stone of Dibon, discovered in 1868, and now in the Louvre. The Berlin *Moabitica* are valueless.—Schlottmann himself, the unshaken champion of their genuineness, conceding that they are mere scribbling, and do not even form words, much less sentences. The literature of the subject is to be found in the commentaries on the Old Testament books, and in those on the inscription of Mesha. (J. WE.)

MO'ALLAKAT. *Al-Mo'allakāt* is the title of a group of seven longish Arabic poems, which have come down to us from the time before Islam. The name signifies "the suspended" (pl.), the traditional explanation being that these poems were hung up by the Arabs on or in the Ka'ba at Mecca. The oldest passage known to the writer where this is stated occurs in the *Ik̄d* of the Spanish Arab, Ibn 'Abd-Rabbih (A.D. 861-940), *Būlāk* ed. vol. iii, p. 116 sq. We read there: "The Arabs had such an interest in poetry, and valued it so highly, that they took seven long pieces selected from the ancient poetry, wrote them in gold on rolls (?) of Coptic cloth, and hung them up (*allakāt*) on the curtains which covered the Ka'ba. Hence we speak of 'the golden poem of Amraalkais,' 'the golden poem of Zohair.' The number of the golden poems is seven; they are also called 'the suspended' (*al-Mo'allakāt*)." Similar statements are frequent in later Arabic works. But against this we have the testimony of a contemporary of Ibn 'Abd-Rabbih, the grammarian Nahhās (ob. A.D. 949), who says in his commentary on the *Mo'allakāt*: "As for the assertion that they were hung up in [*sic*] the Ka'ba, it is not known to any of those who have handed down ancient poems." This cautious scholar is unquestionably right in rejecting a story so utterly unauthenticated. The customs of the Arabs before Mohammed are pretty accurately known to us; we have also a mass of information about the affairs of Mecca at the time when the Prophet arose; but no trace of this or anything like it is found in really good and ancient authorities. We hear, indeed, of a Meccan hanging up a spoil of battle on the Ka'ba (Ibn Hishām, ed. Wüstenfeld, p. 431). Less credible is the story of an important document being deposited in that sanctuary, for this looks like an instance of later usages being transferred to pre-Islamic times. But at all events this is quite a different thing from the hanging up of poetical manuscripts. To account for the disappearance of the *Mo'allakāt* from the Ka'ba we are told, in a passage of late origin (De Sacy, *Chrestom.*, ii. 480), that they were taken down at the capture of Mecca by the Prophet. But in that case we should expect some hint of the occurrence in the circumstantial biographies of the Prophet, and in the works on the history of Mecca; and we find no such thing. That long poems were written at all at that remote period is improbable in the extreme. All that we know of the diffusion of Arabic poetry, even up to a time when the art of writing had become far more general than it was before the spread of Islam, points exclusively to oral tradition. Moreover, it is quite inconceivable that there should have been either a guild or a private individual of such acknowledged taste,

¹ Ernst Frenkel, *An-Nahhās' Kommentar zur Mu'allaka des Imru'ul-Qais* (Halle, 1876), p. viii.

or of such influence, as to bring about a consensus of opinion in favour of certain poems. Think of the mortal offence which the canonization of one poet must have given to his rivals and their tribes! It was quite another thing for an individual to give his own private estimate of the respective merits of two poets who had appealed to him as umpire; or for a number of poets to appear at large gatherings, such as the fair of 'Okáz, as candidates for the place of honour in the estimation of the throng which listened to their recitations. In short, this legend, so often retailed by later Arabs, and still more frequently by Europeans, must be entirely rejected.² The story is a pure fabrication based on the name "suspended." The word was taken in its literal sense; and as these poems were undoubtedly prized above all others in after times, the same opinion was attributed to "the [ancient] Arabs," who were supposed to have given effect to their verdict in the way already described. A somewhat simpler version, also given by Nahhās in the passage already cited, is as follows: "Most of the Arabs were accustomed to meet at 'Okáz and recite verses; then if the king was pleased with any poem, he said, 'Hang it up, and preserve it among my treasures.'" But, not to mention other difficulties, there was no king of all the Arabs; and it is hardly probable that any Arabian king attended the fair at 'Okáz. The story that the poems were written in gold has evidently originated in the name "the golden poems" (literally "the gilded"), a figurative expression for excellence. We must interpret the designation "suspended" on the same principle. In all probability it means those (poems) which have been raised, on account of their value, to a specially honourable position. Another derivative of the same root is *il̄k*, "precious thing."

The selection of these seven poems can scarcely have been the work of the ancient Arabs at all. It is much more likely that we owe it to some connoisseur of a later date. Now Nahhās says expressly in the same passage: "The true view of the matter is this: when Hammád arráwiya (Hammád the Rhapsodist) saw how little men cared for poetry, he collected these seven pieces, urged people to study them, and said to them: 'These are the [poems] of renown.'" And this agrees with all our other information. Hammád (who lived in the first three quarters of the 8th century A.D.) was perhaps of all men the one who knew most Arabic poetry by heart. The recitation of poems was his profession. To such a rhapsodist the task of selection is in every way appropriate; and it may be assumed that he is responsible also for the somewhat fantastic title of "the suspended."

The collection of Hammád appears to have consisted of the same seven poems which are found in our modern editions, composed respectively by Amraalkais, Tarafa, Zohair, Labid, 'Antara, 'Amr ibn Kolthūm, and Hārith ibn Hilliza. These are enumerated both by Ibn 'Abd-Rabbih, and, on the authority of the older philologists, by Nahhās; and all subsequent commentators seem to follow them. We have, however, evidence of the existence, at a very early period, of a slightly different arrangement. Two of the foremost authorities in Arabic poetry are Abū 'Obaida and Mofaddal,—men who for care and accuracy in preserving the genuine text were far ahead of their much older contemporary Hammád. Both of these inserted a poem by Nābigha and one by A'shā in place of those of 'Antara and Hārith;³ and, if our informant has expressed

² Doubts had already been expressed by various scholars, when Hengstenberg—rigid conservative as he was in theology—openly challenged it; and since then it has been controverted at length in Nöldeke's *Beiträge zur Kenntnis der Poesie der alten Araber* (Hanover, 1864), p. xvii. sqq. Our highest authority on Arabic poetry, Professor Ahlwardt, concurs in this conclusion; see his *Bemerkungen über die Aechtheit der alten arabischen Gedichte* (1872), p. 25 sq.

³ The passage is cited by Nöldeke, *Beiträge*, p. xx. sq.

himself correctly, they also called this modified collection *Mo'allakāt*. Mofaddal employs, besides, the names "the seven long [poems]" and "the necklaces." This last became afterwards a common title for the seven poems. The comparison of songs to strings of pearls is a very apt one, from the nature of the Arabic poem, composed as it is of separate loosely-connected parts. Hence it became so popular that even in ordinary prose to speak in rhythmical form is called simply *naẓm*, "to string pearls." Mofaddal expressly opposes the view of those who did not acknowledge the pre-eminence of the seven poets selected by him. This appears to be an attack on Hammád for including in his collection the works of two men who for poetic fame could certainly never enter the lists with Nābigha and A'shā. It is *prima facie* more likely that a later writer should have replaced the less famous poets by those who were universally placed in the first rank, than *vice versa*. Perhaps another fact is of some importance here. Hammád, a Persian by descent, was a client of the Arab tribe, Bakr ibn Wā'il. In the heathen period this tribe was much at war with the closely-related tribe Taghlib. Now of all Arabic poems none was more famous than that in which 'Amr ibn Kolthūm celebrates in glowing terms the praises of his tribe Taghlib. If, therefore, Hammád's collection embraced this poem, it was very natural for him to gratify his patrons the Bakrites by placing alongside of it that of Hārith—a Bakrite and contemporary of 'Amr—where he extols his own tribe and assails the Taghlibites with bitter scorn. Such considerations did not affect Abū 'Obaida and Mofaddal.

The authority of these men has so far prevailed that the poems of their favourites Nābigha and A'shā often appear in the manuscripts, not indeed instead of those of 'Antara and Hārith, but after the other seven. Thus we sometimes read of *nine* *Mo'allakāt*. The first author in whom the writer has observed this is the great philosophic historian Ibn Khaldūn (A.D. 1332-1406); he mentions instead of Hārith the far more celebrated 'Alkama; whether relying on ancient authority, or by an oversight, we cannot tell. In an excellent collection of forty-nine long poems by Abū Zaid al-Korashī (date unknown) Mofaddal's seven poems appear in the first class, "the necklaces;" but Nābigha and A'shā are each represented by a different piece from that usually reckoned among the *Mo'allakāt*. By this editor the name "golden poems," which, as we have seen, sometimes occurs as a synonym of "Mo'allakāt," is applied to seven quite distinct songs.¹ This uncertainty as to the selection and the titles may serve as an additional proof that the "suspension," on the Ka'ba or anywhere else, is a fable.

The lives of these seven (or nine) poets were spread over a period of more than a hundred years. The earliest of them, according to the common and probably correct opinion, was AMRAALKAIS (pronounced also Imrookais, Imraalkais, &c.), regarded by many as the most illustrious of Arabian poets. His exact date cannot be determined; but probably the best part of his career fell within the first half of the 6th century. He was a scion of the royal house of the tribe Kinda, which lost all its power at the death of King Hārith ibn 'Amr in the year 529.² The poet's royal father, Hōjr, by some accounts a son of this Hārith, was killed by Bedouins. The son led an adventurous life as a refugee, now with one tribe, now with another, and appears to have died young. The anecdotes related of him—which, however, are very untrustworthy in detail—as well as his poems, imply that the glorious

¹ See Nöldeke, *Beiträge*, p. xxi., and the catalogue of the Arabic coll. in the British Museum, p. 480 sqq.

² See *Tabarī's Geschichte der Perser und Araber . . . übersetzt von Th. Nöldeke* (Leyden, 1879), p. 171.

memory of his house and the hatred it inspired were still comparatively fresh, and therefore recent.

The *Mo'allakā* of 'AMR hurls defiance against the king of Hira, 'Amr son of Mundhir, who reigned from the summer of 554 till 568 or 569, and was afterwards slain by our poet.³ This prince is also addressed by Hārith in his *Mo'allakā*. Of TARAFĀ, who is said to have attained no great age, a few satirical verses have been preserved, directed against this same king. This agrees with the fact that a grandson of the Kais ibn Khālid, mentioned as a rich and influential man in Tarafa's *Mo'allakā* (v. 80 or 81), figured at the time of the battle of Dhū Kār, in which the tribe Bakr routed a Persian army. This battle falls between A.D. 604 and 610 (Nöldeke's *Tabarī*, p. 311).

The *Mo'allakā* of 'ANTARA and that of ZOHĀIR contain allusions to the feuds of the kindred tribes 'Abs and Dhobyān. Famous as these contests were, their time cannot be ascertained. But the date of the two poets can be approximately determined from other data. Ka'b, son of Zohair, composed first a satire, and then, in the year 630, a eulogy on the Prophet; another son, Bojair, had begun, somewhat sooner, to celebrate Mohammed. 'Antara killed the grandfather of the Ahnaf ibn Kais who died at an advanced age in A.D. 686 or 687; he outlived 'Abdallāh ibn Simma, whose brother Doraid was a very old man when he fell in battle against the Prophet (early in A.D. 630); and he had communications with Ward, whose son, the poet 'Orwa, may perhaps have survived the flight of Mohammed to Medina. From all these indications we may place the productive period of both poets in the end of the 6th century.⁴ The historical background of 'Antara's *Mo'allakā* seems to lie somewhat earlier than that of Zohair's.

To the same period appears to belong the poem of 'ALĀMA, which, as we have seen, Ibn Khaldūn reckons amongst the *Mo'allakāt*. This too is certainly the date of NĀBIGHA, who was one of the most distinguished of Arabic poets. For in the poem often reckoned as a *Mo'allakā*, as in many others, he addresses himself to the above-named No'mān, king of Hira, who reigned in the two last decades of the 6th century. The same king is mentioned as a contemporary in one of 'Alkama's poems.

The poem of A'SHĀ, which Mofaddal placed among the *Mo'allakāt*, contains an allusion to the battle of Dhū Kār (under the name "Battle of Hinw," v. 62). This poet, not less famous than Nābigha, lived to compose a poem in honour of Mohammed, and died not long before A.D. 630.

LABID is the only one of these poets who embraced Islam. His *Mo'allakā*, however, like almost all his other poetical works, belongs to the pagan period. He is said to have lived till 661 or even later; certainly it is true of him, what is asserted with less likelihood of several others of these poets, that he lived to a ripe old age.

We have already mentioned that the old Arabic poetry was transmitted not by manuscripts but simply through oral tradition. Many pieces, especially the shorter ones, may have owed their preservation to their hold on the popular memory. But, fortunately, there was a class of men who made it their special business to learn by rote, and repeat, the works either of a single poet or of several. The poets themselves used the services of such rhapsodists (*rāwis*). The last representative of this class is Hammád, the man who formed the collection of *Mo'allakāt*; but he, at the same time, marks the transition from

³ See Nöldeke's *Tabarī*, pp. 170, 172.

⁴ This evidence might be supplemented from a poem in Zohair's name, whose author describes himself as a man of ninety years, and in which the downfall of King No'mān of Hira (A.D. 601, see *Tabarī*, p. 347) is spoken of as a not very recent event. But the genuineness of this poem is more than doubtful (see Ahlwardt, *op. cit.* p. 64, and C. J. Lyall in the *Academy*, March 13, 1880, p. 192).

the rhapsodist to the critic and scholar. Now, when we consider that more than a century—in some cases two centuries—elapsed before the poems were fixed by literary men, we must be prepared to find that they have not retained their original form unaltered. The most favourable opinion of the rhapsodists would require us to make allowance for occasional mistakes; expressions would be interchanged, the order of verses disarranged, passages omitted, and probably portions of different poems pieced together. The loose structure of the ancient poems rendered them peculiarly liable to corruptions of this kind. But the fact is that Hammád in particular dealt in the most arbitrary fashion with the enormous quantity of poetry which he professed to know thoroughly. He is even charged with falsifications of all sorts in this department. Of others, again—and notably of the great philologist Khalaf, "the Red"—it is credibly reported that they used their intimate knowledge of the style and language of the ancients to pass off whole poems of their own making as the productions of earlier authors. The worst anticipations are only too completely confirmed by an examination of such pieces as are still preserved, as is shown most conclusively in Ahlwardt's *Bemerkungen*, already cited. The seven Mo'allakát are indeed free from the suspicion of forgery, but even in them verses are frequently transposed; in all there are lacunæ; and probably all contain verses which do not belong to them. Some of them have more than one introduction. This is the case even with the poem of 'Amr, although, as the finest panegyric of his very powerful tribe, it must have had a wide circulation. The true introduction begins at v. 9; before that we find another which certainly does not belong to this poem, and can hardly be the work of the same poet. 'Amr lived in the desert regions near the lower Euphrates, under the Persian dominion; whereas the author of v. 8 boasts of his carousals in several parts of Roman Syria, and in v. 1 he speaks of drinking wine from a place in Northern Syria. It is evident that all attempts to restore the original order, to fill up blanks, or to remove interpolations, can only be carried to a certain degree of probability at the best; there must always be a large subjective element in judgments on points of the kind. Still less can we hope to discover and rectify the minor changes, in single expressions or grammatical forms, which the text may have undergone before it was fixed in writing. It may be remarked in this connexion that where any ancient song has been transmitted through two different grammatical schools it generally appears in two considerably divergent forms, each having been taken down from the lips of a separate ráwí. Of secondary importance are the errors due to later copyists. Considerable as these often are, we are, at least in many cases, better able to correct them.

Even the masters of old Arabian poetry do not exhibit such characteristic differences in their general manner and style as to leave in the mind a clear idea of their individuality. A few distinct poetic types emerge, but the great majority of these poets present a somewhat monotonous aspect to the Western scholar, who indeed can at best have but a very imperfect feeling for *nuances* of style in this field. But if we are thus unable to isolate the various constituent parts of this poetical literature, and pass a critical opinion on each, we do get from this literature, as a whole, what is of far greater importance than an æsthetic estimate of this or that particular poet, viz. a poetic picture of the whole life and activity of that remarkable people which, amid the endless agitation and endless sameness of its existence, and in an extremely inhospitable region, was preparing one of the mightiest revolutions in the history of the world. This collective impression is hardly impaired by the involuntary alterations made by the ráwis; nor is

it greatly distorted by the forgers of the 2d century of Islam, who were thoroughly familiar with the spirit and style of antiquity, and seldom did violence to them.

The critics of the 2d and 3d centuries A.H. unanimously ranked the poets of the heathen period above those of Islam; and in that verdict we must concur. The older Moslem poets were for the most part mere Epigoni, content, for better or worse, to borrow the style of their pagan predecessors. It is only natural, therefore, that the seven best poems should have been selected from the productions of heathenism. But how these particular seven came to be fixed upon, it is difficult to decide. It is remarkable that people who knew thousands of such poems should have agreed as to the superiority of five, and only differed about two. No doubt the selection was greatly influenced by the widely-established reputation of certain poets, like Amraalkais, Zohair, and Tarafa; while in other cases single poems, such as that of 'Amr, stood in high repute for special reasons. Still, even we, with a much narrower range of selection, should hardly pick out these seven as the finest. In all probability our choice would not light on a single one of them. The truth is, our æsthetic ideal is essentially different from that of those old *litterateurs*. And, while we may certainly consider our own taste, formed on the model of the Greeks and the best of the moderns, to be on the whole purer than theirs, we must not forget that they had the advantage of perfect knowledge of the language and the subject-matter, and could thus perceive a multitude of beautiful and delicate touches, which we either miss entirely or realize with laborious effort. The world of the old Arabian poet lay at an infinite remove from ours. His mental horizon was narrow; but within that horizon every minute detail was seized and designated with precision. Among the nomads, for example, the smallest point of the horse or camel that the eye can see has its importance; the language has precise and generally understood words for them all, where ours has only technical terms. It is the same with all the physical properties of the animal—its paces, etc. Thus, when a poet faithfully described the exterior and the deportment of his camel, that was to his hearers—and the same is true of later critics—a genuine pleasure, because the description conveyed to them a definite pictorial impression. But we do not understand the details of the picture; or, when at best with all the resources of tradition and natural history we have gained some tolerable comprehension of them, the whole still leaves us indifferent. A camel to us is simply not a poetical object; and even a horse ceases to be æsthetically interesting—except perhaps to a sportsman—when one is asked to go over his points in detail. For this reason we are apt to find a great part of Tarafa's Mo'allaká, and many parts of the poems of Amraalkais, viewed as poetry, distasteful rather than interesting. More attractive are the descriptions of the life and habits of wild animals in the desert, such as the wild ass and some species of antelope, which the poets are fond of introducing (see, e.g., the Mo'allaká of Labíd). There are also many vivid sketches from nature to be met with,—nature, of course, as seen in the very monotonous Arabian landscape. Monotony, indeed, is a predominant characteristic of this poetry. When one first reads poems where the bard begins by shedding tears over the scarcely perceptible traces of the dwelling of his beloved in years gone by, one's sympathy is aroused. But when poem after poem is found to commence with the same scene, and possibly with almost the same words, the emotion is somewhat damped. No doubt such occurrences must really have been very common in the nomad life; nevertheless the suspicion becomes at last irresistible that for the most part all this is pure fiction. Nor can we be sure that the

poets are always to be taken *au sérieux* when they describe those carousals, and other adventures in peace and war, of which they love to boast. They are probably more serious in the narratives of their love experiences: these are often very highly coloured, and yet are always pervaded by a certain natural refinement, which is too often wanting in the later erotic poetry of the Moslems. But there, too, our enjoyment is frequently marred by minute and even prosy descriptions of the physical charms of the object of affection.

The lyrical and even the more rhetorical passages of the poems make in general a deeper impression upon us than the descriptive portions, to which they owe their distinctive character, and which are often intimately blended with the former. When those old Arabs are really moved by love, or rage, or grief, when personal or tribal vanity vents itself in immoderate boasting, invective, or banter, then they strike chords that thrill our breasts. In those passages where genuine human feeling is stirred, they also display far greater individuality than in the more conventional descriptions. Especially affecting are the numerous passages or complete poems which mourn over the beloved and venerated dead. Their sober practical philosophy too, as it is presented in the Mo'allaká of Zohair and in many of Labíd's poems, is really impressive.

The Mo'allakát are highly characteristic specimens of this poetry. They exhibit nearly all its merits as well as most of its defects. Amongst its merits we ought, perhaps, to include the unflinching regularity of the verse. That a people living under such extremely simple conditions should have cultivated a purely quantitative metre, so euphonious and so rigorously adhered to, is a fact worthy of our highest admiration. It is one evidence of that sense of measure and fixed form which is, in other directions also, a marked feature in the life and speech of the Arabs. The mere fact that in their verses they give so much attention to elegance of expression deserves commendation. Amongst the defects of this poetry we must emphasize the loose connexion between the separate parts. We require a poem, like any other work of art, to be a compact unity; the Arabs and many other Orientals lay all the stress on the details. In the Mo'allaká of Tarafa, for instance, after the poet has spoken long enough about his beloved, he starts off in this fashion: "But I banish care when it comes near with a"—she-camel of such and such qualities, and then proceeds to give a description of his riding-camel. Equally abrupt transitions occur in almost all these poems, generally more than once in the same poem. In many cases a sort of unity is preserved by making the different sections represent so many scenes from the life of the poet or from the common life of the Bedouins; but even then there is something unsatisfactory in the want of real connexion. It does not mend matters much when the poet keeps up a merely mechanical transition; as, for example, when he speaks first of his camel, then with the words "it is as swift as a wild ass which," &c., passes to a description of that animal, and again proceeds, "or as swift as an ostrich which," &c., in order to introduce the ostrich.

This loose structure of the poems explains the fact that from a very early period particular pieces were culled from larger works and recited by themselves. For the town-Arabs of later times this procedure was especially convenient. For them the wild ass or oryx-antelope had little attraction; and on the camel they bestowed about as much notice as we do on our dray-horses and waggons. But the love and hate, the pride and scorn, the fierce lust of revenge and the wailing grief, the bravery and the gaiety, which breathed through the old Bedouin songs, had an intense fascination for them. We see that their attitude towards that poetry had in some degree approximated to our own. Hence it is that some anthologies from the old poetry, made by men

of learning and ability, with an eye to contemporary tastes, are on the whole much more pleasing to us than the complete poems themselves. This is eminently true of the excellent collection edited by Abú Tammám, himself a considerable poet (first half of the 9th century), under the title "Hamása" (Valour). This collection, which, however, embraces many pieces of the Moslem period, is certainly fitted to give a European a rather too favourable idea of ancient Arabic poetry. Whoever wishes really to know that poetry—and without this knowledge it is impossible to understand the Arabs themselves or their language—must betake himself to those which, like the Mo'allakát and others, have been preserved more or less in their integrity.

The Mo'allakát have been repeatedly printed, separately and collectively, both in the West and the East, generally with an Arabic commentary. A good commentary by a competent European is a real desideratum. A work of this kind would do more for the understanding of the poems than any poetical translation, which must always fail in rendering these definite concrete expressions of the Arabs for which we possess neither the idea nor the image. A translation must either be a mere paraphrase or else substitute something utterly vague. (TH. N.)

MOBILE, a city and port of entry of the United States, the capital of Mobile county, and, though not the capital, the largest city of Alabama, lies 140 miles east of New Orleans, on a sandy plain on the west bank of Mobile river, one of the arms of the Alabama. The municipal boundary includes an area about 6 miles long by 2 or 3 in breadth; but, excluding the suburban villas scattered about the nearer hills, the portion occupied by the buildings of the city proper is not more than a mile square. In the matter of paving and shade the streets are generally good, and Government Street especially, with its fine oak trees and gardens, forms an attractive promenade. Besides the spacious granite building erected in 1859 to accommodate the Custom-House, the Post Office, and the United States courts, the principal edifices are the Roman Catholic cathedral of the Immaculate Conception (1833), Christ Church (Episcopal) (1837), the City Hospital (1830), the United States Marine Hospital (1836), the Providence Infirmary, the conjoint market-house and municipal buildings, Barton Academy (occupied by the high schools), and the Alabama Medical College (founded in 1859). About 6 miles out, at Spring Hill, is the Jesuit College of St Joseph, established by Bishop Portier in 1832. As a commercial centre Mobile is in some respects very favourably situated. It is the only port of Alabama; the estuary on which it stands is the outlet for several navigable rivers; and it is the seaward terminus of the Mobile and Ohio railroad, the Mobile and Montgomery, and the Grand Trunk. But, on the other hand, it lies 25 miles from the coast; the lagoon-like bay cut off from the Gulf of Mexico by the narrow isthmus of Mobile Point is extremely shallow; and in 1879 no vessel drawing more than 13 feet could load and unload in the harbour with safety. Since 1827, it is true, various works have been undertaken to improve the approaches: the Choctaw Pass and the Dog River Bar, which had formerly a depth of little more than 5 and 8 feet respectively, were deepened to 17 feet by 1882; but Mobile will not take rank as a satisfactory ocean port till the scheme (now in operation) for constructing a wide channel more than 20 feet deep right through the bay has been fully carried out. The cost of the necessary works being beyond the power both of the city and State, Congress has granted \$270,000 for the purpose of widening the channel to 200 feet, and deepening it to 23 feet. A private company, established in 1876, has built a break-water in the bay, and greatly increased the safety of the harbour. For the years between 1855 and 1859 the average value of exports and imports was respectively

\$23,419,266 and \$711,420; the following figures for recent years show a considerable decline on the total:—

Years ending in June	Exports.	Imports.
1877	\$12,784,171	\$648,404
1878	9,493,306	1,148,442
1879	6,219,818	544,628
1880	7,188,740	425,519
1881	6,595,140	671,252
1882	3,258,605	396,573

In cotton, which forms the staple export, the falling off is particularly noticeable, 632,308 bales being the average for 1855 to 1859, and 365,945, 392,319, and 265,040 bales the quantities for 1879, 1880, and 1881. A great deal of what comes to the Mobile market is sent to New Orleans for shipment, partly that it may obtain a higher price as "Orleans" cotton. Lumber shingles, turpentine and rosin, fish and oysters, and coal, are also important items, but do not make in the aggregate so much as half the value of the cotton. Among the local industrial establishments are several spinning-mills, breweries, cooperages, shipbuilding yards, foundries, and sash and door works. The market gardeners of the outskirts produce a large quantity of cabbages, potatoes, water-melons, tomatoes, &c., to supply the cities of the western and northern States (value in 1879, \$112,520; 1880, \$174,483; 1881, \$159,706; 1882, \$367,194; 1883, estimated \$700,000). Though in 1820 it had no more than 2672 inhabitants, Mobile had 31,255 in 1880; the figures for the intermediate decades being 3194 (1830), 12,672 (1840), 20,515 (1850), 29,258 (1860), and 32,034 (1870).

Founded as a fort by Lemoyne d'Iberville (de Bienville) in 1702, Mobile continued to be the capital of the colony of Louisiana till 1723, when this rank was transferred to New Orleans. The site selected by Lemoyne was probably about 20 miles above the present position, which was first occupied after the floods of 1711. By the Treaty of Paris, 1763, Mobile and part of Louisiana were ceded to Britain; but in 1780 the fort (now Fort Charlotte) was captured by the Spanish general Galvez, and in 1783 it was recognized as Spanish along with other British possessions on the Gulf of Mexico. General Wilkinson, ex-governor of Louisiana, recovered the town for Louisiana in 1813, and in 1819, though its population did not exceed 2500, it was incorporated as a city. In 1864-65 Mobile and the neighbourhood was the scene of important military and naval engagements. The Confederates had surrounded the city by three lines of defensive works, but the defeat of their fleet by Admiral Farragut, and the capture of Fort Morgan, Spanish Fort, and Fort Blakely, led to its immediate evacuation. As a municipal corporation, Mobile had got into such financial difficulties by 1879 that its city charter was repealed, and a board of commissioners established for the liquidation of its debt of \$2,497,856.

MÖBIUS, AUGUST FERDINAND (1790-1868), astronomer and mathematician, was born at Schulpforta, November 17, 1790. At Leipsic, Göttingen, and Halle he studied for four years, ultimately devoting himself to mathematics and astronomy. In 1815 he settled at Leipsic as privat-docent, and the next year became extraordinary professor of astronomy in connexion with the university. Later he was chosen director of the university observatory, which was erected (1818-21) under his superintendence. In 1844 he was elected ordinary professor of higher mechanics and astronomy, a position which he held till his death, September 26, 1868. His doctor's dissertation, *De computandis occultationibus fixarum per planetas* (Leipsic, 1815), established his reputation as a theoretical astronomer. *Die Hauptsätze der Astronomie* (1836), *Die Elemente der Mechanik des Himmels* (1843), may be noted amongst his other purely astronomical publications. Of more general interest, however, are his labours in pure mathematics, which appear for the most part in Crelle's Journal from 1828 to 1858. These papers are chiefly geometrical, many of them being developments and applications of the methods laid down in his great work, *Der Barycentrische Calcul* (Leipsic, 1827), which, as the name implies, is based upon the properties of the mean point or centre of mass. Any point in a plane (or in space) can be represented as the mean point of three (or four) fixed points by giving to these proper weights or coefficients,—an obvious principle which leads in the hands of Möbius to what no doubt is the chief novel feature of the work, a

system of homogeneous coordinates. Besides this, however, the work abounds in suggestions and foreshadowings of some of the most striking discoveries in more recent times—such, for example, as are contained in Grassmann's *Ausdehnungslehre* and Hamilton's *Quaternions*. He must be regarded as one of the leaders in the introduction of the powerful methods of modern geometry that have been developed so extensively of late by Von Standt, Cremona, and others.

MOCHÁ, a town of Yemen on the coast of the Red Sea, in E. long. 43° 20', N. lat. 13° 19'. The point of the coast where Mochá lies appears to have owed early importance to its good anchorage, for the Muza of the *Periplus* (*Geog. Gr. Min.*, i. 273 sqq.), a great seat of the Red Sea trade in antiquity, seems to be identical with the modern Múza' (Yáktú, iv. 680; Niebuhr, *Desc. de l'Arabie*, p. 195), a few miles inland from Mochá. Mochá itself is a modern town, which rose with the coffee trade into short-lived prosperity. The French expedition of 1709 found it a place of some 10,000 inhabitants, and its importance had increased half a century later, when Niebuhr visited it. The chief trade was then with British India. Lord Valencia in 1806 still found the town to present an imposing aspect, with its two castles, minarets, and lofty buildings; but the population had sunk to 5000. The internal disorders of Arabia and the efforts of Mohammed Ali to make the coffee trade again pass through India accelerated its fall, and the place is now a mere village. Mochá never produced coffee, and lies indeed in a quite sterile plain; the European name of Mochá coffee is derived from the shipment of coffee there. The patron saint, Sheikh Shadali, was, according to legend, the founder of the city and father of the coffee trade.

MOCKING-BIRD, or MOKK-BIRD (as Charleton, Ray, and Catesby wrote its name), the *Mimus polyglottus* of modern ornithologists, and the well-known representative of an American group of birds usually placed among the THRUSHES (*q.v.*), *Turdidae*; though often regarded as forming a distinct section of that Family, differing by having the tarsus scutellate in front, while the typical Thrushes have it covered by a single horny plate. The Mocking-bird inhabits the greater part of the United States, being in the north only a summer-visitant; but, though breeding yearly in New England, is not common there, and migrates to the south in winter, passing that season in the Gulf States and Mexico. It appears to be less numerous on the western side of the Alleghanies, though found in suitable localities across the continent to the Pacific coast, but not farther northward than Wisconsin, and it is said to be common in Kansas. Audubon states that the Mocking-birds which are resident all the year round in Louisiana attack their travelled brethren on the return of the latter from the north in autumn. The names of the species, both English and scientific, have been bestowed from its capacity of successfully imitating the cry of many other birds, to say nothing of other sounds, in addition to uttering notes of its own which possess a varied range and liquid fulness of tone that are unequalled, according to its admirers, even by those of the NIGHTINGALE (*q.v.*). This opinion may perhaps be correct; but, from the nature of the case, a satisfactory judgment can scarcely be pronounced, since a comparison of the voice of the two songsters can only be made from memory, and that is of course affected by associations of ideas which would preclude a fair estimate. To hear either bird at its best it must be at liberty; and the bringing together of captive examples, unless it could be done with so many of each species as to ensure an honest trial, would be of little avail. Plain in plumage, being greyish-brown above and dull white below, while its quills are dingy black, variegated with white, there is little about the Mocking-bird's appear-

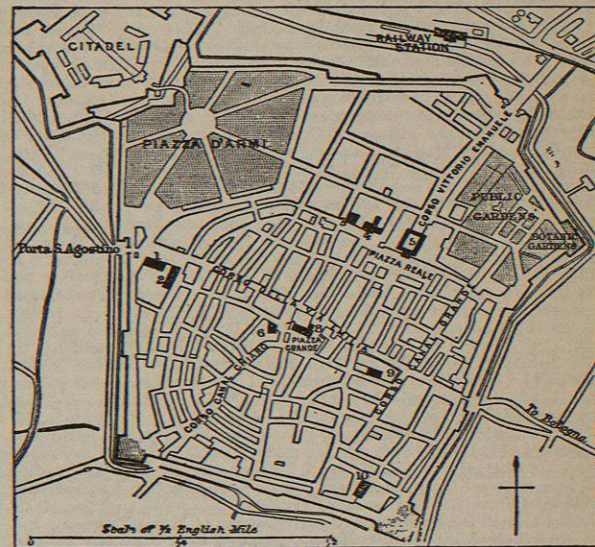
ance beyond its graceful form to recommend it; but the lively gesticulations it exhibits are very attractive, and therein its European rival in melody is far surpassed, for the cock-bird mounts aloft in rapid circling flight, and, alighting on a conspicuous perch, pours forth his ever-changing song to the delight of all listeners; while his actions in attendance on his mate are playfully demonstrative and equally interest the observer. The Mocking-bird is moreover of familiar habits, haunting the neighbourhood of houses, and is therefore a general favourite. The nest is placed with little regard to concealment, and is not distinguished by much care in its construction. The eggs, from three to six in number, are of a pale bluish-green, blotched and spotted with light yellowish-brown. They, as well as the young, are much sought after by snakes, but the parents are often successful in repelling these deadly enemies, and are always ready to wage war against any intruder on their precincts, be it man, cat, or hawk. Their food is various, consisting of berries, seeds, and insects.

Some twelve or fourteen other species of *Mimus* have been recognized, mostly from South America; but *M. orpheus* seems to be common to some of the Greater Antilles, and *M. hilli* is peculiar to Jamaica, while the Bahamas have a local race in *M. bahamensis*. The so-called Mountain Mocking-bird (*Oreoscoptes montanus*) is a form not very distant from *Mimus*; but, according to Mr. Ridgway, it inhabits exclusively the plains overgrown with *Artemisia* of the interior tableland of North America, and is not at all imitative in its notes, so that it is an instance of a misnomer. Of the various other genera allied to *Mimus*, those known in the United States as Thrashers, and belonging to the genus *Harporthynchus*—of which six or eight species are found in North America, and are very Thrush-like in their habits—must be mentioned; but there is only room here to dwell on the Cat-bird (*Galeoscoptes carolinensis*), which is nearly as accomplished an imitator of sounds as its more celebrated relative, with at the same time peculiar notes of its own, from one of which it has gained its popular name. The sooty-grey colour that, deepening into blackish-brown on the crown and quills, pervades the whole of its plumage—the lower tail-coverts, which are of a deep chestnut, excepted—renders it a conspicuous object; and though, for some reason or other, far from being a favourite, it is always willing when undisturbed to become intimate with men's abodes. It has a much wider range on the American continent than the Mocking-bird, and is one of the few species that are resident in Bermuda, while on more than one occasion it is said to have appeared in Europe.

The name Mocking-bird, or more frequently Mock-Nightingale, is in England occasionally given to some of the WARBLERS (*q.v.*), especially the Blackcap (*Sylvia atricapilla*), and the Sedge-bird (*Acrocephalus schoenobenus*). In India and Australia the same name is sometimes applied to other species. (A. N.)

MODENA, one of the principal cities of Northern Italy, formerly the capital of a duchy, and still the chief town of a province and the seat of an archbishop, is situated in the open country in the south side of the valley of the Po, between the Secchia to the west and the Panaro to the east. By rail it is 31 miles E.S.E. of Parma, 24 W.N.W. of Bologna, and 37 S. of Mantua. The observatory stands 135 feet above the level of the sea, in 44° 38' 52" N. lat. and 10° 55' 42" E. long. Dismantled since 1816, and now largely converted into promenades, the fortifications still give the city an irregular pentagonal contour, modified at the north-west corner by the addition of a citadel also pentagonal. Within this circuit there are various open areas—the spacious Piazza d'Armi in front of the citadel, the public gardens in the north-east of the city, the Piazza Grande in front of the cathedral, and the Piazza Reale to the south of the palace. The Æmilian Way crosses obliquely right through the heart of the city, from the Bologna Gate in the east to that of Sant' Agostino in the west. Commenced by the countess Matilda in 1099, after the designs of Lanfranc, and consecrated in 1184, the cathedral (St Geminian's) is a low but handsome building, with a lofty crypt, three eastern apses, and a façade still preserving some curious sculptures of the 12th and 15th centuries. The bell-tower, named La Ghirlandina from the bronze garland surrounding the weathercock, is lined with white marble,

and is 315 feet high; in the basement may be seen the wooden bucket captured by the Modenese from the Bolognese in the affray at Zappolino (1325), and rendered famous by Tassoni's *Secchia Rapita*. Of the other churches in Modena, San Pietro has terra-cottas by the local artist Begarelli, and S. Agostino (now S. Michele) contains the tomb of Sigonius and the tombstone of Muratori. The old ducal palace, begun by Duke Francis I. in 1635 from the designs of Avanzini, and finished by Francis Ferdinand V., is an extensive marble building, and now contains the library (*Bib. Palatina*, see vol. xiv. p. 530), picture-gallery, and museum. Many of the best pictures in the ducal collection were sold in the 18th century, and found their way to Dresden. The valuable *Museo Lapidario* in a building near Porta Sant' Agostino is well known to the



Plan of Modena.

1. Museo Lapidario.
2. S. Agostino.
3. Academy of Fine Arts.
4. S. Domenico.
5. Royal Palace.
6. Archbishop's Palace.
7. Cathedral.
8. Campanile Ghirlandina.
9. University.
10. S. Pietro.

classical antiquary through Cavedoni's *Dichiarazione degli antichi marmi Modenesi* (1828), and the supplements in the *Memoirs of the Academy*, vol. ix., &c. The university of Modena, originally founded in 1683 by Francis II., is mainly a medical and legal school, but has also a faculty of physical and mathematical science. It has about twenty-five professors, and from 200 to 250 students; a library of 20,000 volumes, an observatory, botanical gardens, an ethnographical museum, &c. The old academy of the *Dissonanti*, dating from 1684, was restored by Francis in 1814, and now forms the flourishing Royal Academy of Science and Art (*Memoirs* since 1833); and there are besides in the city an Italian Society of Science founded by Anton Mario Lorgna, an academy of fine arts, a military college (1859), an important agricultural college, and a lyceum and gymnasium, both named after Muratori. In industrial enterprise the Modenese show but little activity, silk and linen goods and iron-ware being almost the only products of any note. Commerce is stimulated by a good position in the railway system, and by a canal which opens a water-way by the Panaro and the Po to the Adriatic. The population of the city was 32,248 in 1861, and 30,854 in 1871; that of the commune 55,512 in 1861, and 58,058 in 1881.

The DUCHY OF MODENA, an independent sovereign state