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Pliny's Papyrus (2003)

Excerpts from Pliny's *Natural History*, Book XIII
Rome, 77AD

English translation by H. Rackham, Harvard University

XXI.

We have not yet touched on the marsh-plants nor the shrubs that grow by the rivers. But before we leave Egypt, we shall also describe the nature of papyrus, since our civilization or at all events our records depend very largely on the employment of paper. According to Marcus Varro we owe even the discovery of paper to the victory of Alexander the Great, when he founded Alexandria in Egypt, before which time paper was not used. First of all people used to write on palm leaves and then on the bark of certain trees, and afterwards folding sheets of lead began to be employed for official muniments, and then also sheets of linen or tablets of wax for private documents; for we find in Homer that the use of writing tablets existed even before the Trojan period, but when he was writing even the land itself which is now thought of as Egypt did not exist as such, while now paper grows in the Sebennyitic and Saitic nomes of Egypt, the land having been subsequently heaped up by the Nile, inasmuch as Homer wrote that the island of Pharos, which is now joined to Alexandria by a bridge, "was twenty four hours" distance by sailing ship from the land. Subsequently, also according to Varro, when owing to the rivalry between King Ptolemy and King Eumenes about their libraries, Ptolemy suppressed the export of paper, parchment was invented at Pergamu; and afterwards the employment of the material on which the immortality of human beings depends spread indiscriminately.

XXII.

Papyrus then grows in the swamps of Egypt or else in the sluggish waters of the Nile where they have overflowed and lie stagnant in pools not more than about three feet in depth; it has a sloping root as thick as a man's arm, and tapers gracefully up with triangular sides to a length of not more than about 15 feet, ending in a head like a thyrus; it has no seed, and is of no use except that the flowers are made into weather for statues of the gods. The roots are employed by the natives for timber, and not only to serve as firewood but also for making various utensils and vessels; indeed, the papyrus itself is plaited to make boats, and the inner bark is woven into sail cloth and matting, and also cloth, as well as blanket and ropes. It is also used as chewing gum, both in the raw state and when boiled, though only the juice is swallowed. Papyrus also grows in Syria on the borders of the lake round which grows the scented flag already mentioned, as King Antiochus would only allow ropes made from this Syrian papyrus to be used in his navy, the employment of esparto not yet having become general. It has recently been realized that papyrus growing in the Euphrates near Babylon can

also be used in the same way for paper, nevertheless up to the present the Parthians prefer to embroider letters upon cloths.

XXIII.

The process of making paper from papyrus is to split it with a needle into very thin strips made as broad as possible, the best quality being in the center of the plant, and so on in the order of its splitting up. The first quality used to be called "hieratic paper" and was in early times devoted solely to books connected with religion, but in a spirit of flattery it was given to name of Augustus, just as the second best was called "Livia paper" after his consort, and thus the name "hieratic" came down to the third class. The next quality had been given the name of "amphitheater paper," from the place of its manufacture. This paper was taken over by the clever workshop of Fannius at Rome, and its texture was made finer by a careful process of insertion, so that it was changed from common paper into one of first-class quality, and received the name of the maker, but the paper of this kind that did not have this additional treatment remained in its own class as amphitheater paper. Next to this is the Saitic paper named from the town where it is produced in the greatest abundance, being made from shavings of inferior quality, and the Taeneotic, from a neighboring place, made from material still nearer the outside skin, in the case of which we reach a variety that is sold by mere weight and not for its quality. As for what is called "emporitic" paper, it is no good for writing but serves to provide covers for documents and wrappers for merchandise, and consequently takes its name from the Greek word for a merchant. After this comes the actual papyrus, and its outermost layer, which resembles a rush and is of no use even for making ropes except those used in water. Paper of all kinds is "woven" on a board moistened with water from the Nile, muddle liquid supplying the effect of glue. First an upright layer is smeared on to the table, using the full length of papyrus available after the trimmings have been cut off at both ends, and afterwards cross strips complete the latticework, The next step is to press it in presses, and the sheets are dried in the sun and then joined together, the next strip used always diminishing in quality down to the worst of all. There are never more than twenty sheets to a roll.

XXIV.

There is a great difference in the breadth of the various kinds of paper: the best is thirteen inches wide, the hieratic two inches less, the Fannian measure then inches and the amphitheater paper one less, vehicle the Saitic is still fewer inches across and not as wide as the mallet used in making it, as the emporitic kind is so narrow that it does not exceed six inches. Other points looked at in paper are fineness, stoutness, whiteness, and smoothness. The status of best quality was altered by the emperor Claudius. The reason was that the thin paper of the period of Augustus was not strong enough to stand the friction of the pen, and moreover as it let the writing show through there was a fear of a smudge being caused by what was written on the back, and the great transparency of the paper had an unattractive look in other respects. Consequently, the foundation was made of leaves of second quality and the woof or cross layer of leaves of the first quality; Claudius also increased the width of the sheet, making it a foot across. There were also eighteen-inch sheets called "macrocola," but examination detected a defect in them, as tearing off a single strip damaged several pages. On this account Claudius paper has come to be preferred to all other kinds, although

the Augustus kind still holds the field for correspondence; but Livia paper, having no quality of a first-class kind, but being entirely second class, has retained its position.

XXV.

Roughness is smoothed out with a piece of ivory or a shell, but this makes the lettering apt to fade as owing to the polish so given the paper does not take the ink so well but has a shinier surface. The damping process if carelessly applied often causes difficulty in writing at first, and it can be detected by a blow with the mallet, or even by the musty smell if the process has been rather carelessly carried out. Spottiness also may be detected by the eye, but a bad porous strip found inserted in the middle of the pasted joins, owing to the sponginess of the papyrus, sucks up the ink and so can scarcely be detected except when the ink of a letter runs so much opportunity is there for cheating. The consequence is that another task is added, the process of paper weaving.

XXVI.

The common kind of paste for paper is made of fine flour of the best quality mixed with boiling water, with a very small sprinkle of vinegar, for carpenter's paste and gum make too brittle a compound...