

PHILOSOPHICAL TRANSACTIONS.

For the Months of *January* and *February*.

February 9. 1673
74.

The C O N T E N T S.

An Account of some uncommon Mineral Substances, found in English Coal-and Iron-Mines. A Description of certain figured Stones like Plants, supposed by some to be Plants petrified. A Representation of an Icy mountain in Helvetia, formerly described. A Letter giving notice to the Public of a New way of preserving the Hulls of Ships from Worms, &c. The Natural History of Musick. An Account of two Books: I. MUSICA SPECULATIVA del Mengoli. II. Georg. Wedelii Specimen de Sale Volatili Plantarum. An Advertisement concerning a Remedy to prevent the Rot in Sheep, at this present time much complain'd of in England.

An Account of two uncommon Mineral Substances, found in some Coal-and Iron-Mines of England; as it was given by the Intelligent and Learned Mr. Jessop of Bromhal in Yorkshire to the Ingenious Mr. Lister, and by him communicated to the Publisher in a letter of January 7. 1673
74.

S I R,

THat this Letter may be the more acceptable to you, I shall communicate some *Excerpta*, taken out of the Letters, which that Inquisitive and Learn'd Gentleman Mr. Jessop is pleased to honour me with. I will give, (saith he) the best answer I can in short to the Questions, you put to me in your last.

1. The *Fungus subterraneus*, I sent you a large quantity of, was gotten in a Rocky Lime-stone ground, on a Common about two miles distant from *Castleton* in the Peake of Darbyshire, 15 or 16 yards deep, in the *Old wan* (as they call a Mine formerly wrought and stopt up) covered with earth, that had either fallen or was thrown in. There is no coal-bed that is known of within five or six miles of the place.

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Of this *Fungus* by Mr. *Jessops* procurement I received (saith Mr. *Lister*) a good quantity ; and yet I am not able to say, in what form it grows? It does not seem to me to have any constant shape ; at least the pieces that I receiv'd are much like Peats or Turff, cut up in the high moors, both in the sooty colour and inward substance ; this only is more clammy and tough, and dries not. And some of this fungous substance is very soft and like gelly. In and about the more solid pieces, (of which I have some, half a foot square,) are many big lumps of a *bituminous* substance. This *bitumen* is very inflammable like Rosin ; it is very light, it breaks firm, and shines like good Aloes ; and for color, it is not much unlike it, save that it is more dark-color'd and purplish ; yet there is much of it of a dark green color. We distill'd a parcel of it, which yielded us an Acidulous limpid water ; then, a white liquor, which was, I guess, from some of the Oily parts precipitate. And in the last place, a copious yellow Oyl, not unlike that of *Succinum* or Pitch. In the neck of the Retort we could discern no Volatil Salt, as in the like process upon Amber. Whether this owes its Original to a Vegetable, or is truly a concret Mineral Juyce and a fossil Bitume, I forbear to determine. I have not read of any such fungous Earth, in which *bitumen* naturally grows and adheres : And the finding of it in an Old mine doth much favour the first opinion of being a Vegetable substance ; either the very substance of the propps of Wood, they make use of in lining and supporting the Grooves, thus alter'd, or certain *fungus's* growing out of them. That Birch, (of which there is great plenty and hath been vast woods all these mountanous parts of *England* over) will yield a *bitumen*, as limpid as the sap is which runs from it by tapping, if we now had the skill to extract it, *Pliny* is very express, l. 16. c. 18. *Bitumen ex Betula Galli excoquunt*. And more-over it is certain, that much of that wood, if not all, which is dugg up in the high moors of *Craven*, and which the people there call and use for *Candlewood*, is no other than *Birch*, as it appears from the grain and bark ; and yet this wood kindleth flames, and exudats a rosio, which makes many pronounce it very *Firr-wood*. Whatever this *bitumen* is, which this *Fungus subterraneus* yields, it much differs from the *Asphaltum* of the Shoppes ; and you may command

mand a specimen of it, that it may be better examin'd by more skillful Naturalists.

2. There is an other Mineral Juyce in these parts of England, which I have much inquir'd after, and have longed to see; and now I am likely to be satisfied, as you may think by Mr. Jessops words: *Captain Wain*, (saith he) *a diligent and knowing person in Mines*, gave me a *White Liquor*, resembling *Cream* both in colour and consistence, which he found in great quantities at the bottom of a *Coal-pit*, 49 yards deep, which I reserve for you. But this is not all the information that hath been given me about this *White Liquor*. Mr. *George Planton*, a curious and very intelligent person, writes thus to me from *Sheriff Hales* in *Shropshire*: *I shall trouble you with an Observation, I lately met with in our Iron-mines*, especially that which the *Country people* here call the *White Mine*, which yields the best *Iron-Stone*. The *Miners* do commonly, upon the breaking of a *Stone*, meet with a great quantity of a *whitish milky Liquor*, inclosed in the *Center* of it; they sometimes find a *Hogshead* contain'd in one cavity. 'Tis in taste *sweetish*; only it hath a *Vitriolick* and *Iron-like twang* with it.

So far Mr. *Lister* and his friends, from whose generosity we have received a parcel of each of these substances for further examination.

A Description of certain Stones figured like Plants, and by some Observing men esteemed to be Plants petrified: Communicated to the Publisher by the same Mr. Lister, from York Novemb. 4th. 1673.

S I R,

IN this paper I send you an Account of some of the Parts of certain *Stones* figured like *Plants*; which *Agricola* (5^a *Fossilium*) calls *Trochita*, and the compound ones *Entrochi*; we in English, *St. Cutberds beads*.

Agricola will have them akin for substance to the *Lapides Judaici*; and, indeed, these are of an opaque and dark coloured Sparr; though I have of them from some parts of England of a *white sparr* or *Cawke*, as our *Miners* call it; They all break like *Flint*, polished and shining.

Put into *Vinegar* (saith he) they buble: *Atque etiam repe-*