

the Fire, and let the Stones be well smoaked over it for the space of an hour, until they are well dried in the smoak; then hang them up in a Kitchen or in the Air for a week or more, until they are perfectly dry and hard, after which they may be pack'd up in a Cask or otherwise for Transportation. If there be more Stones than will conveniently go into the Skillet or Kettle, you may make another boiling of them, and add a proportion of fresh Ashes and order them as before.

Observations on the making of Cochineal, according to a Relation had from an Old Spaniard at Jamaica, who had lived many years in that part of the West-Indies where great quantities of that rich Commodity are yearly made.

THE Insect whereof it is made he confirms to be the same which we call the Lady-Bird, *alias* Cow-Lady, which he says at first appears like a small blister or little knob upon the Leaves of the Shrub on which they breed, which afterwards by the heat of the Sun, become a live Insect as above, or small Grub. This Shrub is allowed by several Authors to be the same which we call the *Prickle-Pear*, or *Indian Fig*, having thick roundish Leaves that grow one out of another and full of sharp prickles. These Grubs in process of time becoming Flies like our Lady-Birds, as above, and being come to full Maturity, (which must be found out by experience in collecting them at several seasons) they Kill by making a great smother of some combustible matter, to Windward of the shrubs whereon the Insects are feeding, (having before spread some Cloaths all under the Plants) whereby all the Insects being Smother'd and Kill'd, by shaking the Plants will tumble down upon the Cloths. Thus they are gathered in great quantities

ties with little trouble. Then they spread them on the same cloaths in some bare sandy place, or stone pavement, and expose them to the heat of the Sun, until they are dry, and their Bodies shrivel'd up, which being rubb'd gently betwixt ones Hands, will crumble into Grains and the Wings separate from them, which must be garbled out; others, 'tis said, do expose them to the Sun in broad and shallow Copper Basons, wherein the reflection of the Sun will dry them sooner. These Plants called the *Indian Fig*, are easily and quickly propagated by putting a single Leaf about half its depth into the Ground, which seldom fails to take Root and throw out other new Leaves at the top thereof, (of which Plant 'tis said in *Barbadoes* impregnable Fences are made). Others say they may be raised from the Seed, or small Grains which are to be found in the proper season in the Fruit which is something like a Fig, arising out of certain yellow Flowers or Blossoms that grow out at the tops of the uppermost Leaves, which Fruit is full of a Red Pulp, that when full ripe stains the Hands of them that touch it, like Mulberries, with a Purple or Sanguine Colour, whereon, or on the Blossoms, some say the Insects do feed; which haply may be the occasion of that rich Tincture within their Bowels. It may be enquired likewise, whether those Grains, which are the Seed of the Fruit, may not produce some Tincture as well as the dried Insects, or whether whilst they are Maggots, or small Grubs, being ordered and dried as above, they may not shrivel up like Grains, and be as good as when they are become Flies with Wings.

The Gentleman to whom we are oblig'd for these Communications, at the same time propos'd the following Quæries concerning *Salt-Petre* and *Indico*, to which 'tis hop'd some curious and knowing Persons may be prevailed with to furnish proper Answers, which would be very grateful to the Royal Society.

1. *To enquire how the Salt-Petre is made in India; whether by the heat of the Sun or with Fire or both: what sort of Earth the Lye whereof the Salt-Petre is made is extracted from: how the said proper Earth may be known, either by Colour or Taste or otherwise; in what Latitude or Climate it most abounds: whether it be found most, nigh to Rivers on the Sea side, or in Woods from the falling of the Leaves, and how deep in the Earth it is to be search'd for.*
2. *To get a true Account of the whole Operation of Indico from Jamaica, or elsewhere, the managing of the Plants, and how rais'd, whether by Seed or otherwise, and to know the proper Season for Sowing if rais'd by Seed, and what sort of Soil is required for the same.*

Some Experiments and Observations made of the force of the pressure of the Water in great Depths, made and communicated to the Royal Society, by a Person of Honour.

A April 8th. *ft. v.* 1680. Being off of *Pantalaria* near *Sicily* in a Calm, I let down a Bottle 70 Fathom, stopp'd with an excellent good tender Cork, well fitted, and bound down; and the Cork came up in the Bottle $\frac{3}{4}$ full of Salt Water: Whereupon making some Reflection on the softness of the Cork, the Bottle was again fitted with an excellent good Cork, but of a woodiness or hardness as some Corks are, with the which, being let down in like manner, the Cork continued in its place, but as it were bruised, and the Bottle as before, about $\frac{3}{4}$ full of Salt Water. Whereupon I took a good Ox Bladder, and bound it four-fold over the mouth of the Bottle without any Cork at all, only I put a piece of Leather to keep the Glafs from cutting the Bladder,

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