

### III. *Account of an irregular Tide in the River of Forth, by Mr. Edward Wright.*

Read May 3.  
1750.

**A**S the following Account of a very uncommon anomalous Tide in the River of *Forth*, contains several Circumstances worthy Observation, I thought it might not be disagreeable to that learned and famous Society to which I address it.

There are in this River, at Ebbing and Flowing, certain irregular Motions, not to be found in any other River in *Scotland*, perhaps in *Great Britain*, or even in all *Europe*, called by the common People betwixt the Villages of *Alloa* and *Culrofs*, Leakies, which Name I shall likewise make use of, for want of a better. This Leaky is this: When the River is flowing, before high Water, it intermits and ebbs for a considerable time, after which it resumes its former Course, and flows till high Water; and, *vice versa*, in the Ebbing, before low Water, the River flows again for some time, and then ebbs till low Water. The Leaky begins at a Place called *Queen's Ferry*, seven Miles above *Leith*, at neap Tide, and low Water, and goes to the House of *Maner*, which is about twenty-five Miles above *Queen's Ferry*, which is to be understood by Water; for in this River, from a little above *Alloa* to *Stirling*, there are such a prodigious Number of Turnings and Windings, that though it be but four Miles betwixt these two Places by Land, yet it is twenty-four by Water. This I take notice of rather, as I take these Windings to be the Cause of the Leakies. At Neap Tide and high

high Water, as also at Spring Tide and low Water, the Leaky reaches as far as the Sea fills, which is to the Groves of *Craigforth*, nineteen Miles above *Maner* House, and three above the Town of *Stirling*. At *Queen's Ferry* there are no Leakies at Neaps and Springs at high Water, nor in the latter at low Water; they begin betwixt *Borrowstownness*, a Village about seven Miles above *Queen's Ferry*, and the Mouth of a Rivulet called *Carron*, five or six Miles further up the River than *Borrowstownness*. What is very remarkable, in the very lowest Neaps the Leaky, after it has ebbed for some time, before high Water, makes up again, and will be two Feet higher than the Main Tide. - In the Beginning of the Spring Tides, it does not rise so high by a Foot: At the dying of the Stream, it is often two Feet higher than the Main Tide, which is to be understood, before high Water, when the Leaky makes up again. At Neap Tide and low Water it will ebb two Hours, and fill as much, and at full Water ebb an Hour, and fill another.

It is likewise to be remarked, that at Change of the Moon, at low Water, the Leaky will continue two Hours, the Beginning of the Tide for that Time, which then stands, and does not ebb till Flood (the Beginning of the Flowing), and at full Water, will ebb and flow an Hour or more.

It is observable, that at full Moon, there are no Leakies, either at high or low Water, in the Spring Tides which are at that time, but in the Neaps which follow them, these Motions are observable, as before described; as also in the Spring Tides, which happen upon the Change of the Moon, called by the Commonalty, the Overloup, there are

Leakies both at high and low Water. All this is to be understood, when the Weather is seasonable; for, otherwise, these Motions are not so discernible.

This Account I have collected partly from my own Observation, having past a great Part of my Life at a Country-seat near *Alva*, where the Leakies are to be seen in great Perfection, and partly from what I have learned from People living on different Parts of the River, whose Observations, as well as my own, I find exactly agree with those of a learned \* Relation of mine, who, near seventy Years ago, diligently observed and enquired into the Phænomena of this irregular Tide.

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#### IV. *The Case of a Tumor growing on the Inside of the Bladder, successfully extirpated by Joseph Warner, Surgeon to Guy's Hospital; communicated in a Letter to the President.*

Read May 10.  
1750.

**A**N Excrecence or Tumor arising from the internal Coat of the Bladder is a Disease, though not very common, yet sufficiently known to the Curious: But I believe that hitherto, no one has attempted the Cure of this Disorder by Extirpation, nor indeed can it be supposed, that the Instances are frequent, where the Operation is practicable. But as it is notorious from the History of Physick, and Surgery, that several Disorders which were

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\* His Observations were communicated to Sir Robert Sibbald, in order to assist him in compiling a *Scotish Atlas*.