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A Science Service Feature

? WHY THE WEATHER ?

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A TRADE WIND FANTASY

A rational and partly correct explanation of the trade winds was given by the astronomer Edmund Halley in 1686 and a substantially complete explanation by George Hadley in 1735. The classic memoirs of both men are preserved in the Philosophical Transactions of the Royal Society of London. Two years before the date of Halley's memoir the same Transactions published another paper on this subject that makes amusing reading at the present day.

The author, Dr. Martin Lister, explains the trade winds as the "constant breath" of the sargasso weed, "because the matter of that Wind, coming (as we suppose) from the breath of only one Plant it must needs make it constant and uniform; whereas the great variety of Plants and Trees at land must needs furnish a confused matter of Winds." Lister's notion harks back to Aristotle's theory of exhalation or emanation as the cause of winds.

The most remarkable characteristic of the trade winds is that they blow constantly from an easterly quadrant; an effect, as Hadley discovered, of the earth's rotation. Lister quaintly speculates on this matter as follows:

"As for the direction of this Breeze from East to West, it may be owing to the General current of the Sea, for a gentle Air will still be led with the stream of our Rivers, for example. Again every Plant is in some measure a Heliotrope, and bends itself, and moves after the Sun, and consequently emits its vapours thitherward, and so its direction is in that respect also owing in some measure to the Course of the Sun."

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