

Episode Eighty-Six - Typhoons and Whirlwinds

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Welcome to Episode Eighty-Six of Lucretius Today.

I am your host Cassius, and together with my panelists from the EpicureanFriends.com forum, we'll walk you through the six books of Lucretius' poem, and discuss how Epicurean philosophy can apply to you today. We encourage you to study Epicurus for yourself, and we suggest the best place to start is the book, "Epicurus and His Philosophy" by Canadian professor Norman DeWitt.

For anyone who is not familiar with our podcast, please visit EpicureanFriends.com where you will find our goals and our ground rules. If you have any questions about those, please be sure to contact us at the forum for more information.

In this Episode 86 we will read approximately Latin lines 423 through 527 as we discuss typhoons and whirlwinds and continue further into Book Six.

Now let's join Don reading today's text.

Munro Notes-

423-450: presters are thus formed : if the wind cannot break the cloud, it forces it clown in the shape of a column to the sea, where it bursts and causes a furious boiling and surging: sometimes the whirl- wind will gather up atoms of cloud and wrap them round, and will so imitate a real prester: this will shew itself sometimes on land, but oftener on the sea.

451-494: clouds are thus formed: first many particles in the sky get entangled and form small clouds; and then these unite, until the sky is overcast : thus high mountains are seen to smoke with mist, because the small particles of cloud are first carried to these by the wind: then moisture steams up from the sea and rivers; and the pres- sure of the ether above condenses it; finally many atoms, flying as I have shewn through space, come into this heaven of ours, and increase the mass from all sides.

495-526: rain comes in this way: many particles of matter rise with the clouds from all things; then the clouds suck up much moisture from the sea and rivers; thus the clouds both by their own weight and the pressure of the wind emit rains; and these are increased by the sun helping to dissolve the clouds: rains are heavy and lasting, when these causes combine, and the reeking earth sends its moisture back: the rain- bow comes from the sun shining right upon a mass of cloud.

Browne 1743

[423] It is easy, from what has been observed, to apprehend the cause of those whirlwinds (which the Greeks, from the Nature of Things, justly call Presters) and how they descend from above and fall into the sea. They are sometimes seen to descend from the air into the water like a pillar, and the sea, raging about with violent blasts of wind, seems to boil, and is exceedingly tossed, and whatever ships are caught with the reach of the hurricane are in the utmost danger of being cast away.

[431] This happens when the force of the wind, impetuously whirling within the cloud, is not able to break it, but drives it on, so that it falls like a column let down into the sea. This descent is gradual, as if it was thrust by some hand or arm, and spread over the waters. When the cloud bursts, the fury of the wind breaks out among the waves, and violently whirling round takes fire, and raises a wonderful heat and fermentation in the waters; for a rolling whirlwind descends with the cloud, which being slow in its motion, it bears along with it through the air, and when it has thrust the heavy body of the cloud into the sea, it plunges furiously with it into the water, and with a dreadful noise sets all the element in a blaze.

[443] It sometimes happens that a whirlwind, as it passes through the air, will scrape off some seeds from the bodies of the clouds, and rolling itself within, will look like a prester descending from above into the sea. When this vortex of wind falls upon the earth, it bursts out without being kindled into flame, it whirls with mighty force, and raises a tempest and bears down everything before it. This sort of whirlwind is not common at land, for the high hills hinder its descent and breaks its force, but it appears frequently in the wide sea and in the open air.

[451] Now for the origin of clouds: These are formed when certain rough and hooked seeds, as they fly about, at length unite in the higher region of the air that is above us, but are held together loosely, and not bound in any close and strict embrace. Of these the thin and small clouds are first produced, and many of them meeting together, and pressing close, make the large and heavy clouds, which the winds drive every way abroad till they break out into a raging storm.

[459] And then, the nearer the tops of mountains approach the sky, the higher they are, the more they smoke, and appear covered with the thick darkness of a yellow cloud, because the mists that arise are so thin and subtle that before they are discovered by the eye they are carried aloft by the winds to the tops of the highest hills. And since they unite there in larger bodies, and show thick and condensed, they seem to rise from the tops of these hills into the air, for when we ascend a high mountain, the thing itself and the sense demonstrate that the winds tend to the highest places and reign there.

[470] Besides, that nature raises many exhalations from the wide sea is plain, by observing that garments expanded upon the shore will soon be wet; and therefore, to form such vast bodies of clouds, many seeds are thrown off and arise from the motion of salt waters.

[476] And we see that mists and watery particles rise from all the rivers, and from the earth itself; which, like a vapour, are from thence squeezed out and carried upwards, and cover the whole heavens with darkness, and uniting together by degrees, are sufficient to produce the

clouds. For the seeds that are continually descending from above in a confused manner, continually beat these mists upon the back, and by condensing and pressing them close, form them into clouds over all the sky.

[483] It may be, likewise, that seeds from without, from the immense space of the universe, may flow hither, and unite in the production of the flying clouds, for I have proved before that these seeds are without number, and that the void is infinite. I have shown how suddenly and with what celerity they pass through this boundless space. It is no wonder therefore that tempests and dark clouds are in so short a time frequently spread over the whole heavens, and cover the high mountains, the seas, and the earth, with so quick a motion; since, from every quarter, through all the passages of the air, through all the breathing-places, I may say, of the universe, the seeds can make their way hither and unite, or withdraw and fly away again.

[495] And now I shall explain in what manner the rain is formed within the clouds above, and falls down in showers upon the earth. I shall first show that many seeds of rain are raised from every thing, together with the clouds, and that they increase together, both the clouds and the rain contained within, in the same manner as the blood increases in proportion with our bodies, or as sweat or any other moisture diffused through the limbs. The clouds likewise, like hanging fleeces of wool, suck up many particles of salt water when the winds drive them over the open sea. And so by the same rule a quantity of moisture is raised into the clouds from all the rivers, and there these many seeds of waters meeting from all parts, and uniting variously together, the clouds being full, are obliged to discharge their load of moisture for two reasons: either the force of winds drives them close, or the number of them, raised one above another, presses them down from above with their own weight, and makes the showers to pour down. Besides, when the clouds are made rare and thin by the winds, or are dissolved by the heat of the sun striking upon them, they discharge their rainy moisture and drop, as wax dissolves and melts over a hot fire.

[517] But expect a violent storm of rain when these clouds, heaped up, are pressed, not only by their own weight, but driven close by the stroke of winds from without. The rains used to confine us long at home, and to last for some time, when there are seeds of moisture in abundance; when the dropping clouds are raised on heaps above, and are driven every way abroad, and when the earth, thoroughly soaked, sends back the vapors into the air.

[524] And when the sun, in a dark storm of rain, strikes with its beams directly upon an opposite cloud, full of moisture, then you see the colors of the rainbow drawn upon the black clouds.

[527] And all other appearances which are formed and increase in the upper regions of the air., and all the meteors that are raised in the clouds, the snow, the winds, the hail, and chilling frosts, and the strong ice that hardens the surface of the waters, and stops and binds up the current of rivers as they flow; it is easy to account for all these, and to apprehend their causes, and how they are produced, if you consider well the virtue and power of the seeds from whence they spring.

Munro 1886

[423] To proceed, it is easy from these facts to understand in what way those things, which the Greeks from their nature have named presters, come down from above into the sea. For sometimes a pillar so to speak is let down from heaven and descends into the sea, and round about it the surges boil, stirred up by heavy blasts of winds; and all ships caught in that turmoil are dashed about and brought into extreme danger.

[431] This takes place when at times the force of the wind put in motion cannot burst the cloud which it essays to burst, but weighs it down, so that it is like a pillar let down from heaven into the sea, yet gradually, just as if a thing were thrust down from above and stretched out to the level of the waters by the fist and push of the arm; and when the force of the wind has rent this cloud, it bursts out from it into the sea and occasions a marvelous boiling in the waters; for the whirling eddy descends and brings down together with it yon cloud of limber body; and as soon as it has forced it down full-charged as it is to the levels of the sea, the eddy in a moment plunges itself entire into the water, and stirs up the whole sea with a prodigious noise and forces it to boil.

[443] Sometimes too the eddy of wind wraps itself up in clouds and gathers out of the air seeds of cloud and imitates in a sort the prester let down from heaven. When this prester has let itself down to the land and has burst, it belches forth a whirlwind and storm of enormous violence; but as it seldom takes place at all and as mountains cannot but obstruct it on land, it is seen more frequently on the sea with its wide prospect and unobstructed horizon.

[451] Clouds are formed, when in this upper space of heaven many bodies flying about have in some one instant met together, of a rougher sort, such as are able, though they have got the very slightest holds of each other, to catch together and be held in union. These bodies first cause small clouds to form; and these next catch together and collect into masses and increase by joining with each other and are carried on by the winds continually until a fierce storm has gathered.

[459] The nearer too the tops of a mountain in each case are to heaven, the more constantly at this elevation they smoke with the thick darkness of a swarthy cloud, because, as soon as clouds form, before the eyes can see them, thin as they are, the winds carry and bring them together to the highest summits of a mountain; and then at last when they have gathered in a greater mass, being now dense they are able to make themselves visible and at the same time they are seen to rise up from the very top of the mountain into the ether: the very fact of the case and our sensations, when we climb high mountains, prove that the regions which stretch up on high are windy.

[470] Again clothes hung up on the shore, when they drink in the clinging moisture, prove that nature takes up many bodies over the whole sea as well. This makes it still more plain that many bodies may likewise rise up out of the salt heaving sea to add to the bulk of clouds; for the two liquids are near akin in their nature.

[476] Again we see mists and steam rise out of all rivers and at the same time from the earth as well; and they forced out like a breath from these parts are then carried upwards and overcast heaven with their darkness and make up clouds on high as they gradually come together; for the heat of starry ether at the same time presses down too on them and by condensing as it were weaves a web of clouds below the blue.

[483] Sometimes there come here into heaven from without those bodies which form clouds and the flying storm-rack; for I have shown that their number passes numbering and that the sum of the deep is infinite; and I have proved with what velocity bodies fly and how in a moment of time they are wont to pass through space unspeakable. It is not therefore strange that a tempest and darkness often in a short time cover over with such great mountains of clouds seas and lands, as they hang down upon them overhead, since on all sides through all the cavities of ether and as it were through the vents of the great world around the power of going out and coming in is accorded to the elements.

[495] Now mark and I will explain in what way the rainy moisture is formed in the clouds above and then is sent down and falls to the earth in the shape of rain. And first I will prove that many seeds of water rise up together with the clouds themselves out of all things and that both the clouds and the water which is in the clouds thus increase together; just as our body increases together with the blood, as well as the sweat and all the moisture which is in the frame. The clouds likewise imbibe much sea-water as well, like hanging fleeces of wool, when the winds carry them over the great sea. In like manner moisture is taken up out of all rivers into the clouds; and when the seeds of waters full many in number in many ways have met in them, augmented from all sides, then the close-packed clouds endeavor to discharge their moisture from two causes: the force of the wind drives them together, and likewise the very abundance of the rain-clouds, when a greater mass than usual has been brought together, pushes down, presses from above and forces the rain to stream out. Again when the clouds are also rarefied by the winds, or are dispersed, being smitten at the same time by the heat of the sun, they discharge a rainy moisture and trickle down, just as wax over a hot fire melts away and turns fast into liquid.

[517] But a violent rain follows, when the clouds are violently pressed upon by both causes, by their own accumulated weight and by the impetuous assault of the wind. And rains are wont to hold out and to last long, when many seeds of waters are stirred to action, and clouds upon clouds and rack upon rack welling forth from all quarters round about are borne along, and when the reeking earth steams moisture back again from its whole surface.

[524] When in such a case the sun has shone with his rays amid the murky tempest right opposite the dripping rain-clouds, then the color of the rainbow shows itself among the black ,clouds.

[527] As to the other things which grow by themselves and are formed by themselves, as well as the things which are formed within the clouds, all, without exception all, snow, winds, hail, and cold hoarfrosts and the great force of ice, the great congealing power of waters, and the

stop which everywhere curbs running rivers, it is yet most easy to find out and apprehend in mind how all these things take place and in what way they are formed, when you have fully understood the properties assigned to elements.

Bailey 1921

[423] Next after this, it is easy to learn from these things in what way there come into the sea, shot from on high, what the Greeks from their nature have named fiery presters. For it comes to pass sometimes that as it were a column let down descends from the sky into the sea, around which the surges boil, violently stirred by breathing blasts, and all ships that are then caught in that turmoil, are harried and come into great danger.

[431] This comes to pass sometimes when the force of the wind set in motion cannot burst the cloud it starts to burst, but presses it down, so that it is weighed down like a column from sky to sea, little by little, as though something were being thrust down and stretched out into the waves by a fist and the pushing of an arm above; and when it has rent this cloud asunder, the force of the wind bunts forth thence into the sea and brings to pass a wondrous seething in the waters. For a whirling eddy descends and brings down along with it that cloud of pliant body; and as soon as it has forced it down pregnant on to the levels of ocean, the eddy on a sudden plunges its whole self into the water, and stirs up all the sea with a great roar, constraining it to seethe.

[443] It comes to pass also that an eddy of wind by itself wraps itself in clouds, gathering together seeds of cloud from the air and, as it were, imitates the prester let down from the sky. When this eddy has let itself down to earth and broken up, it vomits forth a furious force of whirlwind and storm. But because this happens but rarely at all, and mountains must needs bar it on land, it is seen more often on a wide prospect of sea, and in an open stretch of sky.

[451] Clouds gather up, when many bodies as they fly in this upper expanse of heaven have all at once come together—bodies of rougher kind, such as can, though they be but intertwined with slight links, yet grasp and cling to one another. These first of all cause little clouds to form; then these grip hold of one another and flock together, and uniting they grow and are borne on by the winds, until at last a furious tempest has gathered together.

[459] It comes to pass, too, that mountain-tops, the closer they are to the sky, the more at that height do they smoke continually with the thick darkness of a murky cloud, because, when first the clouds form, still thin, before the eyes can see them, the winds carry them and drive them together to the topmost peaks of the mountain. There it comes to pass at last that, gathered now in a greater throng and thickened, they can be seen, and at once they seem to rise into the open sky from the very summit of the mountain. For clear fact and our sense, when we climb high mountains, proclaim that windy regions stretch above.

[470] Moreover, that nature lifts up many such bodies all over the sea is shown by clothes hung out on the shore, when they take in a clinging moisture. Wherefore it is all the more seen that many bodies too can rise to swell the clouds from the salt tossing ocean; for in all their nature

these two moistures are akin.

[476] Moreover, we see clouds and vapour rising from all rivers, and likewise from the very earth which, like a breath, are forced out hence and carried upwards, and curtain the heaven with their darkness, and little by little, as they meet, build up the clouds on high. For the vapour of the starry ether above presses down on them too, and, as it were by thickening, weaves a web of storm-cloud beneath the blue.

[483] It happens, too, that there come into our sky those bodies from without which make clouds and flying storms. For I have shown that their number is innumerable, and the sum of the deep measureless, and I have set forth with what speed the bodies fly, and how in a moment they are wont to traverse through space that none can tell. So it is not strange if often in a short time storm and darkness cover up sea and land with such great storm-clouds, brooding above, inasmuch as on all sides through all the pores of the ether, and, as it were, through the breathing-holes of the great world all around there is furnished for the particles exit and entrance.

[495] Come now, in what manner the rainy moisture gathers together in the high clouds, and how the shower falls shot down upon the earth, I will unfold. First of all it will be granted me that already many seeds of water rise up with the clouds themselves from out of all things, and that both alike grow in this manner, both clouds and all water that is in the clouds, just as our body grows along with its blood, and likewise sweat and all the moisture too that is within the limbs. Besides, they often take in also much moisture from the sea, just like hanging fleeces of wool, when the winds carry the clouds over the great sea. In like manner moisture from all streams is raised to the clouds. And when many seeds of waters in many ways have duly come together there, increased from all quarters, the packed clouds are eager to shoot out the moisture for a double cause; for the force of the wind pushes it on and the very mass of the clouds, driven together in greater throng, presses on it and weighs it down from above, and makes the showers stream out. Moreover, when the clouds, too, are thinned by the winds or broken up, smitten by the sun's heat above, they send out the rainy moisture and drip, even as wax over a hot fire melts and flows in a thick stream.

[517] But a violent downpour comes to pass, when the clouds are violently pressed by either force, their own mass and the impulse of the wind. Yea, and the rains are wont to hold on long and make a great stay, when many seeds of water are gathered, and clouds piled upon clouds and streaming storms above them are borne on from every quarter, and when the whole earth smoking, breathes out its moisture.

[524] When at such time the sun amid the dark tempest has shone out with its rays full against the spray of the storm-clouds, then among the black clouds stand out the hues of the rainbow.

[527] All other things which grow above and are brought to being above, and which gather together in the clouds, all, yea all of them, snow, winds, hail, chill hoar-frosts, and the great force of ice, that great hardener of waters, the curb which everywhere reins in the eager streams, it is yet right easy to find these out, and to see in the mind in what manner they all

come to be and in what way they are brought to being, when you have duly learned the powers that are vouchsafed to the elements.