

The Seasonal Complex

Glen Atkinson

Whilst wandering about RS nature lectures I saw that the 'Rosetta Stone' Elements on pg 68 provides a structural basis for the seasonal energetic flow. In addition to Dr Steiner's medical lectures we can bring in three lectures from the agriculture lexicon, that links Alchemical Chemistry to the seasons. The result is the Seasonal Complex (pg 74). I have presented a more detailed story of this as part of my 'RS Nature Stories'.

The three lectures I consider pivotal to understanding RS agricultural worldview are

Cosmic Workings in Earth and Man, Lecture 5, given on October 31 1923

Man as Symphony of the Creative Word, Lecture 7, given on the 7th Nov 1923

Agriculture Course, Lecture 2, given on 10 Jun 1924.

All these lectures provide an image of the forces active throughout the annual growth cycle, however interestingly they each use a different reference language to each other. Hence they need to be bought together, and seen as one story, as best we can.

The first lecture is from **"Cosmic Workings in Earth and Man", lecture five given on the 31st of October 1923**. This lecture talks of the SAP story regarding plant growth, and it has three primary players the 'Wood Sap' coming from below, the 'Life Sap' coming through the light activities, which make the leaf and foliage. When the Life Sap is strong enough, it draws in the incoming 'Cambium' force, sourced from the Stars. This stream is carried upon the outer planets 2 frequencies, and through the cosmic warmth processes, along the cambium pathways of the plant, and in towards the Centre of the Earth, where the World Spirit of the plant kingdom resides. During the winter, a maturing of the Wood Sap in the soil, combines the female cambium star forces from the previous season, (with the male forces in the seed,) along with energetic earth forces, and together they push the Wood Sap upwards, from mid Winter.

The second lecture is from **"Man as a Symphony of the Creative Word", lecture seven given on the 2nd of November 1923**. This is some three days after the previous lecture, and here Rudolf Steiner talks of how the Ethers work through the seasons, and also how the Elemental Beings work as transformative agents in the development and synthesis of these Etheric processes. He outlines the flow of activities within the Earths Etheric body. Using the Earths surface as the diaphragm membrane

between the Above and the Below, we are told how the different Earth bodies work through the Ethers to move above the surface of the Earth, and thus have a direct effect upon nature, in one hemisphere. Before they recede again back within the Earth, and become active there and in the other hemisphere. My experience, suggests this subtle seasonal movement can be seen in nature.

RS also tells of how the Elementals play into facilitating the interaction of the primary forces, be they Ethers, Saps or Cosmic and Earthly Forces and Substances.

The third lecture in my series is the **second lecture from the Agriculture course, given on the 10th of June 1924**. This is some 8 months, later after these earlier two lectures, however it presents the third view of energetic plant growth. In this lecture we are presented with a view of the plant sitting within what we call 'the threefold agricultural individuality'. In the beginning of the lecture Dr Steiner clarifies for us, that the plant in the Earth is like a human turned on their head. So the nervous system is in the Earth, and the metabolic system is above the plant. Above the leaves to the top of the plant, and even into the atmosphere around the plant, is considered the metabolic region of the plant. The leaf region is the Rhythmic system, equating to the human chest region. This threefold image is an archetypal organizational structure that we find throughout the physical bodies of all manifest beings.

This story only takes about two pages to tell, and so the rest of lecture talks about the **Physical Formative Forces (PFF)**. Most of the readers of the course remember the line 'the ABC of everything is **what is Cosmic and what is Earthly**'. This is a pivotal story, however many students only get so far as seeing Cosmic and Earthly as a simple polarity, between what is above and what is below, and carried by either Calcium or Silica.

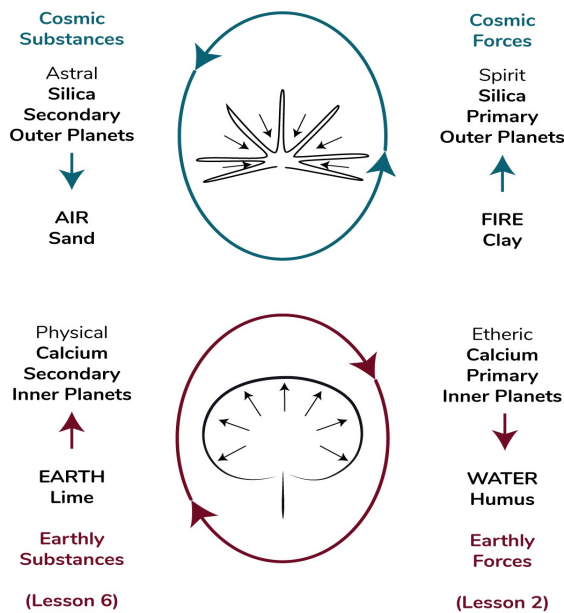
In this second part of this lecture, we have an intricate story of the **Calcium and Silica processes working as Forces as well as Substances**. This gives **4 processes** to consider. **Cosmic Forces and Cosmic Substances, along with Earthly Forces and Earthly Substances**. Each pair form a circular process. One part of the process comes towards the Earth and the second part is moving away from the Earth. This occurs in both groups. The real gift of the second lecture, is RS telling us the physical carriers of these four activities, which are available for us to use. He talks of the Cosmic Forces being strengthened by the Clay substance, the Cosmic Substance is strengthened through the physical presence of Silica Sand. The Earthly Substance is strengthened through what he calls Lime,

which is also to be taken as cations in general. Then the Earthly Forces are enhanced through the activity of humus, which is more specifically carbon and all the processes associated with carbon chemistry in agriculture.

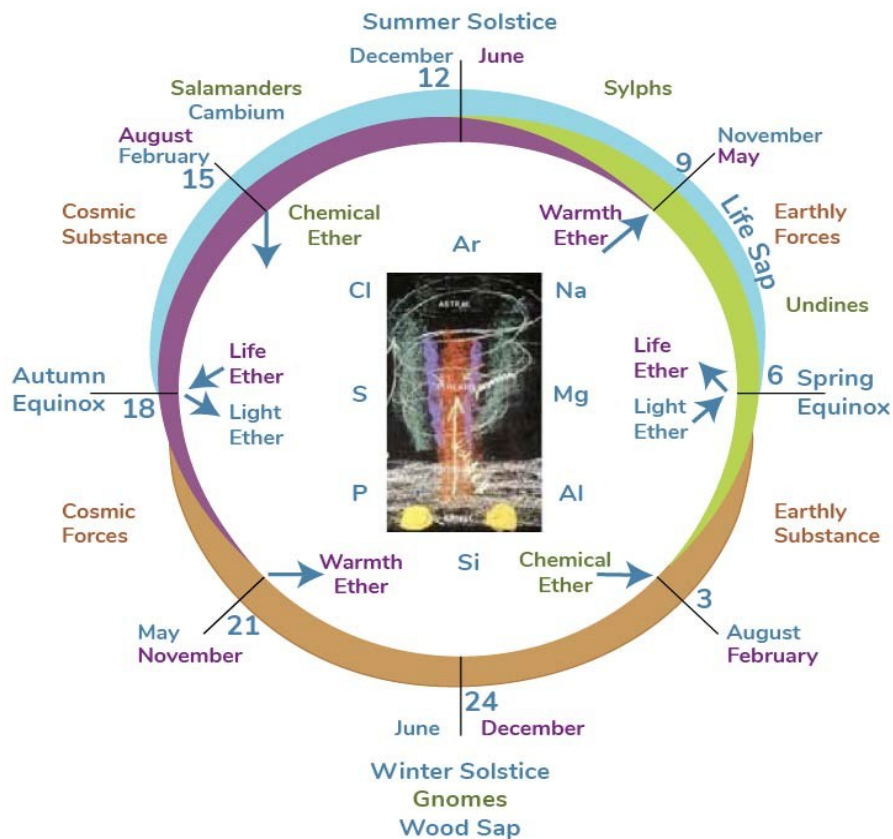
This story is told within a seasonal context, so can be related back to the previous two lectures. Within this lecture we are provided with an image of how

these physical formative forces play into the processes of plant growth, as controlling levers. In the earlier two lectures above, we weren't given any particular preparations that we could use to control those processes. However with this lecture we are given the four basic elements for 'levering' the seasonal flow of the energy, and so influencing everything talked of in these three lectures. The rest of the agriculture lectures talk further about the physical formative forces level of manifestation, along with stories of the primary energetic activities, sourced from the World Spheres. Interestingly, there's only one significant reference in the agriculture course to the Ethers. The great majority of the course talks of these two other levels of activity. I suggest this is why the people who use the Ethers as their central reference for understanding biodynamics, have great difficulty understanding the Agriculture course.

Their story is told in the 'Man as Symphony' lecture series. I see people have worked with the first two lectures, however I do not see a lot of literature or work done on the Physical Formative Forces story. It is a different story to those, however extremely compatible with them, and now we have some physical levers, by which we can control all three stories. The biodynamic preparations provide more levers, working through the primary energetic activities, - Spirit, Astral, Etheric and Physical - which do work into and through the lower levels of the Ethers and PFF.



The Seasonal Complex



SPIRIT Indirect Outer Pl. 1 Warmth Cosmic Forces Clay	Cambium Salamanders ↓ Sylphs	Saturn	P	Valerian	Strengthens the Spirit
ASTRAL Direct Outer Pl. 2 Light Cosmic Substance Sand	Life Sap ↓ Undines	Jupiter	S	Dandelion	Merge Spirit and Astral towards the Physical
ETHERIC Direct Inner Pl. 1 Chemical Earthly Forces Humus	Gnomes Wood Sap ↑ 500	Mars	Cl	Nettle	Harmonise the Astrality
PHYSICAL Indirect Inner Pl. 2 Life Earthly Substance Cations		Sun	Ar	Equisetum	Astral stimulates the Etheric within the metabolism
		Venus	Na	Yarrow	Opens the Etheric to the Astral
		Mercury	Mg	Chamomile	Stimulates the Etheric
		Moon	Al	Oak Bark	Etheric binds to the Physical
		Earth	Si	Quartz	Spirit binds to the Physical

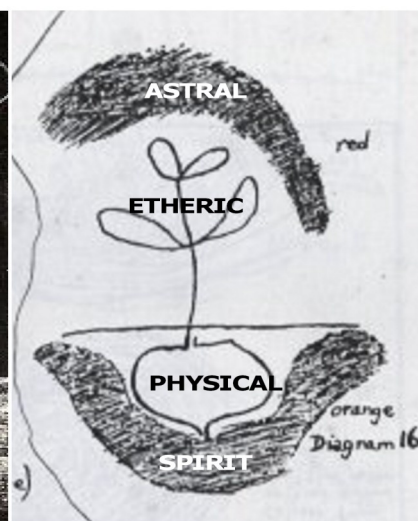
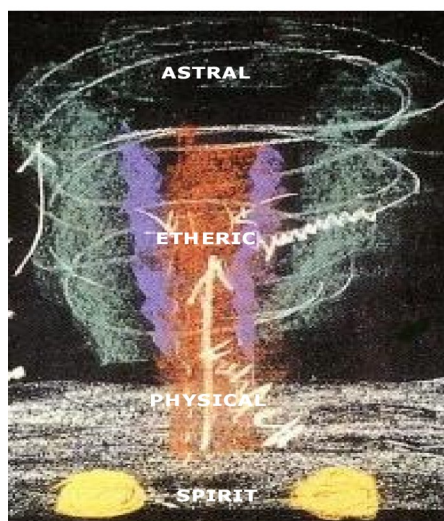
In the 'Seasonal Complex' (pg 74) I integrate these three stories into one dynamic with Alchemical Chemistry. What follows is the basic story, mostly in RS own words, with my 'adjustments' in italics. In this story we do not have the planets to follow, instead the PFF and chemicals are our best guide.

"But the stem, formed from *the Wood sap, which is a combination of Cosmic Forces and Earthly Substances, that have gone through Silica's fructification event*, rises into the air *with the help of clays Aluminum 'softening' influence on Silica*, and the air always contains moisture. It comes into the moist air, it comes with the *Wood sap* which has created it, from *Aluminum's* earthy-fluidic into *Sodium's* fluidic-airy *drenched Earthly Forces*, and life springs up in it anew, so that around it *Magnesium's* green leaves appear and finally *Sodium Chlorides* flowers. Again there is life. You see, in the foliage, in the leaf, in the bud, in the blossom, there is once more the sap of life; *Aluminum's* wood-sap is dead life-sap. In the stem, life is always dying; in the leaf it is always being resurrected *by Magnesium*. So that we must say: We have *Aluminum's Earthly Substance* wood sap, which mounts *from the Earth*; then we have *Magnesium and Sodium Chloride's* life-sap *from the Etheric and Astral activity of the environment*. *Magnesium and Sodium give the period of the Earthly Forces*. And what does this do! It travels all round and brings forth the leaves everywhere: so that you can see the spirals in which the leaves are arranged. The living sap really circles round. It arises from *Sodium's* fluid-airy element into which the plant comes when it has grown out of *Aluminum's* earthy-fluidic element.

The stem, the woody stem, is dead and only that which sprouts forth

Cosmic Workings Lecture 5

Agriculture C. Lecture 8



around the plant is alive. This you can easily prove in the following very simple way. Go to a tree: you have the stem, then the bark, and in the bark the leaves grow. Now cut the bark away at that point; the leaves come away too. At this point leave the leaves with the bark. The result is that there the tree remains fresh and living, and here it begins to die. The wood alone with its sap cannot keep the tree alive; what comes with the leaves must come from outside and that again contains *etheric filled* life, *from the oxygen in the atmosphere and magnesium in the soil*. We see in this way that the earth can certainly put forth the tree, but she would have to let it die if it did not get *Magnesium and Calcium's etheric* life from the damp air *and the Earthly Forces*: for in the tree the sap is only a chemical, no giver of life. The living sap that circulates gives it life. And one can really say: When the sap rises in the spring, the tree is created anew; when the living sap again circulates in the spring, every year the tree's life is renewed. The earth produces the *Wood* sap, *from the Spirit's Cosmic Forces and Physical Earthly Substance*, from *Aluminum's* earthy-fluidic; the fluidic-airy produces the living sap, *through the action of the Magnesium and Sodium's Earthly Forces and Chlorine's Cosmic Substance*. (3)

These *watery* undine beings, *living through the Magnesium process*, differ in their inner nature from the *Silicious* gnomes. They cannot turn like a spiritual sense-organ outwards towards the universe. They can only yield themselves up to the weaving and working of the whole cosmos in *Sodium's* airy-moist element, and therefore they are not beings of such clarity as the gnomes. They dream incessantly, these undines, but their *metabolic* dream is at the same time their own form. They do not hate the earth as intensely as do the gnomes, but they have a sensitivity to what is earthly. They live *with Magnesium* in the etheric element of water, swimming and swaying through it, and in a very sensitive way they recoil from everything in the nature of a *Sodium* fish; for the fish-form is a threat to them, even if they do assume it from time to time, though only to forsake it immediately in order to take on another *Magnesium* metamorphosis. They dream their own existence. And in dreaming their own existence they bind and release, they bind and disperse the substances of the air, *with the help of the Sodium side of the Earthly Forces*, which in a mysterious way they introduce into the leaves, as these are pushed upwards, *with the help of clay (AlSiO)* by the gnomes. For at this point the plants would wither if it were not for the undines, who approach from all sides *in Magnesium*, and show themselves, as they weave around the plants in their dream-like existence, to be what we can only call the world-chemists. The undines dream the uniting and dispersing of substances. And this *Magnesium*

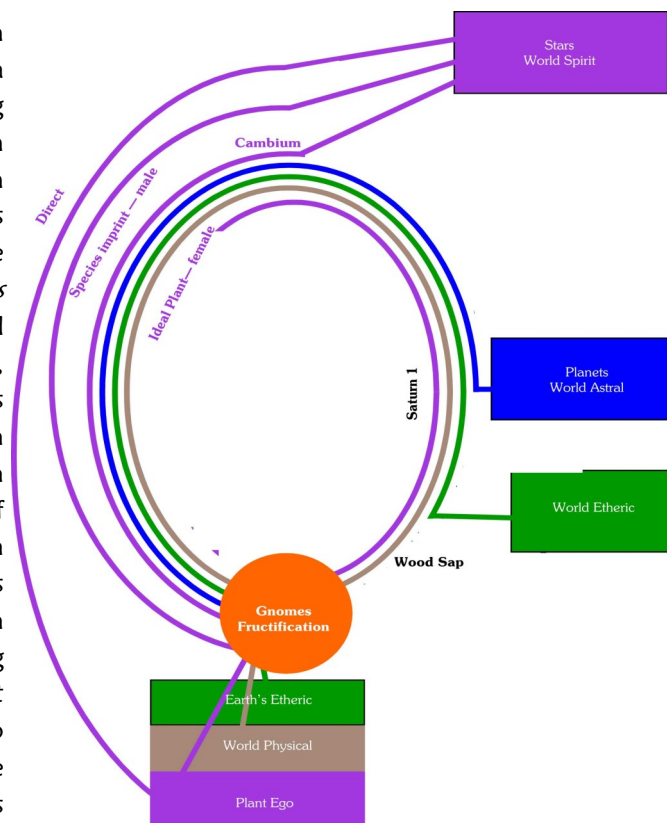
dream, in which the plant has its existence, into which it grows when, developing upwards, it forsakes the ground, this *Magnesium* undine-dream is the world-chemist which brings about in the plant-world the mysterious combining and separation of the substances which emanate from the leaf. We can therefore say that the undines are the chemists of plant-life. They dream of chemistry. They possess an exceptionally delicate spirituality which is really in its element just where *Magnesium and Sodium's etheric water of the Earthly Forces* and *Chlorine's astralised air of the Cosmic Substance* come into contact with each other. The undines live entirely in the element of *Magnesium and Sodium's Earthly Force* moisture, but they develop their actual inner function when they come to the surface of something watery, be it only to the surface of a water-drop or something else of a watery nature. For their whole endeavor lies in preserving themselves from getting the form of a *Sodium* fish, the permanent form of a fish. They wish to remain in a condition of *Magnesium* metamorphosis, in a condition of eternal, endlessly changing transformation. But in this state of transformation in which they dream of the stars and of the sun, of *Chlorine's Cosmic Substance's* light and of *Phosphorus's Cosmic Force* warmth, they become the chemists who now, starting from *Magnesium's* leaf, carry the plant further in its *Sodium enhanced flower bud* formation, after it has been pushed upwards by *Silica's powering* of the gnomes. So the plant develops its leaf growth, and this mystery is now revealed as the *Alkali* dream of the undines, into which the plants grow.

To the same degree, however, in which the plant grows into the *Sodium* dream of the undines, does it now come into another domain, into the domain of those *Chlorine* spirits which live in the airy-warmth element, just as the gnomes live in *Aluminum's* moist-earthly *substance*, and the undines in *Magnesium and Sodium's* moist-airy *earthly forces* element. Thus it is in the *Chlorine supported Cosmic Substance* element, which is of the nature of air and warmth that those beings live which an earlier clairvoyant art designated as the sylphs. Because air is everywhere imbued with *Chlorine's Astral* light, these sylphs, which live in the airy-warmth element, press towards the light, relate themselves to it. They are particularly susceptible to the finer but larger movements within the atmosphere.

When in spring or autumn you see a flock of swallows, which produce as they fly vibrations in a body of air, setting an air-current in motion, then this moving air-current — and this holds good for every bird — is for the sylphs something audible. Cosmic music sounds from it to the sylphs. If, let us say, you are travelling somewhere by ship and the

seagulls are flying around it, then in what is set in motion by the seagulls' flight there is a spiritual sounding, a spiritual music which accompanies the ship.

Again it is the *Chlorinated* sylphs which unfold and develop their being within this sounding music, finding their dwelling-place in the moving current of air. It is in this spiritually sounding, moving element of air that they find themselves at home; and at the same time they absorb what the power of *Chlorine's Astral* light sends into these vibrations of the air. Because of this the sylphs, which experience their existence more or less in a state of sleep, feel most in their element, most at home, where birds are winging through the air. If a sylph is obliged to move and weave through air devoid of birds, it feels as though it had lost itself. But at the sight of a bird in the air something quite special comes over the sylph. I have often had to describe a certain event in man's life, that event which leads the human soul to address itself as "I". And I have always drawn attention to a saying of Jean Paul, that, when for the first time a human being arrives at the conception of his "I", it is as though he looks into the most deeply veiled Holy of Holies of his soul. A sylph does not look into any such veiled Holy of Holies of its own soul, but when it sees a bird an ego-feeling comes over it. It is in what the bird sets in motion as it flies through the air that the sylph feels its ego, *its internal spirit*. And because this is so, because its ego is kindled in it from outside, the sylph becomes the bearer of cosmic love through the atmosphere. It is because the sylph embodies something like a human wish, but does not have its ego within itself but in the bird-kingdom, that it is



at the same time the bearer of wishes of love through the universe.

Thus we behold the deepest sympathy between the sylphs and the bird-world. Whereas the *Silicious* gnome hates the amphibian world, whereas *Sodium's* undine is unpleasantly sensitive to fishes, and is unwilling to approach them, tries to avoid them, feels a kind of horror for them, *Chlorine's* sylph, on the other hand, is attracted towards birds, and has a sense of well-being when it can waft towards their plumage the swaying, love-filled waves of the air. And were you to ask a bird from whom it learns to sing, you would hear that its inspirer is the sylph. Sylphs feel a sense of pleasure in the bird's form. They are, however, prevented by the cosmic ordering from becoming birds, for they have another task. Their task is lovingly to convey *Chlorine's Astral* light to the plant. And just as the undine is *Magnesium's Etheric* chemist for the plant, *stimulating the Earthly Forces*, so is the sylph the *Astral* light-bearer *using the Cosmic Substance / chlorine process*. The sylph imbues the plant with light; it bears light into the plant.

Through the fact that the sylphs bear light and *Cosmic Substances* into the plant, something quite remarkable is brought about in it. You see, the sylph is continually carrying *chlorines* light into the plant. The *Cosmic Substance* light, that is to say the power of the sylphs in the plant, works upon *Sodium's* chemical forces *working with the Earthly Forces*, which were induced into the plant by the undines. Here occurs the inter-working of sylph-light and undine-chemistry. This is a remarkable plastic activity. With the help of the upstreaming substances, *of the Wood Sap*, which are worked upon by the undines, the sylphs weave out of the light an ideal plant-form. They actually weave the *Ideal Plant* within the plant from *Chlorines Cosmic Substance* light, *from the Sylphs* and from the chemical *Earthly Force and Sodium supported* working of the undines. And when towards autumn the plant withers and everything of physical substance disintegrates, *during the Sulphur processes*, then these '*female*' plant-forms begin to seep downwards, and now the *Silicious* gnomes perceive them, perceive what the world — the sun through the sylphs, the air through the *Sodium* undines — has brought to pass in the plant. This the gnomes perceive, so that throughout the entire winter, *with the help of Phosphorus* they are engaged in perceiving below what has seeped into the ground through the plants. Down there they grasp world-ideas in the plant-forms which have been plastically developed with the help of the sylphs, and which now in their spiritual *feminine* ideal form enter into the ground.

Naturally those people who regard the plant as something purely material know nothing of this spiritual *feminine* ideal form. Thus at this

point something appears which in the materialistic observation of the plant gives rise to what is nothing other than a colossal error, a terrible error. I will sketch this error for you.

Fructification *

Everywhere you will find that materialistic science describes matters as follows: The plant takes root in the ground, above the ground it develops its leaves, finally unfolding its blossoms, within the blossoms the stamens, then the seed-bud. Now — usually from another plant — the pollen from the anthers, from the pollen vessels, is carried over to the germ which is then fructified, and through this the seed of the new plant is produced. The germ is regarded as the female element and what comes from the stamens as the male — indeed matters cannot be regarded otherwise as long as people remain fixed in materialism, for then this process really does look like a fructification.

This, however, it is not. In order to gain insight into the process of *Silica's winter* fructification, that is to say the process of reproduction, in the plant-world, we must be conscious that in the first place it is from what the great *Sodium* chemists, the undines, bring about in the plants, and from what the *Chlorinated* sylphs bring about, that the *female* plant-form arises, *as the best expression of what that plant can be in that seasons conditions. This is the female ideal plant-form* which sinks into the ground, *during Sulphur's Autumn*, and is preserved by the gnomes, *during the early winter Phosphorus phase*. It is there below, this plant-form. And there within the earth it is now guarded by the gnomes after they have seen it, after they have looked upon it. The earth becomes the *Silicious* mother-womb for what thus seeps downwards. This is something quite different from what is described by materialistic science.

The Ideal Plant — Cosmic Substance , Astral stream

After it has passed through the *Chlorinated* sphere of the sylphs, the plant comes into the sphere of the *Spirit filled* elemental fire-spirits. These fire-spirits are the inhabitants of the *Phosphoric* warmth-light element. When the warmth of the earth is at its height, or is otherwise suitable, they gather the *Spirits* warmth together, *within the Cosmic Substance process*. Just as the sylphs gather up the light, so do the fire-spirits gather up *Phosphor's* warmth and carry it into the blossoms of the plants. (4)

** This is one of RS's 'contradictions' as a quick search of the RS archive showed 8 instances where RS described fructification as a pollination event, which here he is decrying. AI could not find Goethe saying what RS purports him to say.*

But that is not all. While this is happening, between the bark, still full of living sap, and the woody stem, there is formed a new layer. Now I cannot say that a sap is formed. I have already spoken of wood-sap, living sap, but I cannot again say that a sap is formed: for what is formed is quite solid: it is called cambium. It is formed between the bark which still belongs to the leaves, and the wood. But the plant needs cambium too, in a certain way. You see, *Aluminum's* wood sap is formed in the earthy-fluidic, the life sap in *the Alkali's* fluidic-airy, and the cambium in the warm air, in the warm damp, or the airy-warmth *of the astralised Cosmic Substance, using the Sulphur process*. The plant develops warmth while it takes up life from outside, *through the interaction between the Cosmic Substance and Earthly Forces, which must reach a certain intensity. As indicated by the swirling nature of the image on page 75*. This warmth, *supported by Chlorines World Spirit process* goes inward and *supports Sulphur's cambium activity* inside. Or if the cambium does not yet develop — the plant needs cambium and you will shortly hear why — before the cambium forms, there is first of all developed a thicker substance: the plant gum. Plants form this plant gum in their inner *Sulphuric* warmth, and this, under certain conditions, is a powerful means of healing. Thus the *Aluminum supported Wood* sap carries the plant upwards, *Magnesium's* leaves give the plant *etheric* life, then the leaves *with Cosmic Substance's Sulphuric* warmth produce the gum which reacts on the warmth. And in old plants, this gum, running down to the ground, has become transparent. When the earth was less dense and damper, the gum became transparent and turned to Amber. You see, then, when you take up a piece of Amber, what from prehistoric plants ran down to the ground as resin and pitch. This the plant gives back to the earth: Pitch, Resin, Amber. And if the plant retains it, it becomes cambium.

Through *Aluminum's Wood* sap the plant is connected with the earth; the *Magnesium part of the* life-sap brings the plant into connection with what circulates round the earth — with *Sodium's* airy-moist circumference of the earth. But *it is Sulphur's Cosmic Substance activity of* the cambium that brings the plant into connection with the stars, with what is above, and in such a way that within this cambium the *female ideal* form of the next plant develops. This passes over to the *nutritive cotyledons in the seeds* and in this way the next plant is born, so that the stars indirectly through *Chlorine's side of the Cosmic Substance activity* and the *Sulphureous* cambium create the next plant! So that the plant is not merely created from the seed — that is to say, naturally it is created from the seed, but the seed must first be worked

on by *Chlorine's Cosmic Substance process* and the *Sulphureous* cambium, that is: by the whole heavens.

It is really wonderful — a seed, a humble, modest little seed could only come into existence because the cambium — now not in liquid but in solid form — imitates the whole plant; and this form which arises there in the cambium — a new *female* plant form — this carries the *moon's reproductive* power to the seed to develop through the forces of the earth into a new plant.

Through mere speculation, when one simply puts the seed under a microscope, nothing is gained. We must be clear what parts the *wood* sap, the life sap, the cambium, play in the whole matter. *Aluminum's* wood sap is a relatively thin sap: it is peculiarly fitted to allow chemical changes to take place in it. *Magnesium and Sodium's* life sap is certainly much thicker, *and with Sulphur's help* it separates off its gum. If you make the gum rather thick, you can make wonderful figures with it. Thus the life sap, more pliable than the wood sap, clings more to the plant-form. And then it gives this up entirely to *Sulphur's* cambium. That is still thicker, indeed quite sticky, but still fluid enough to take the forms which are given it by the stars, *via the Cosmic Substance*.

So it is with trees, and so, too, with the ordinary plants. When the rootlet is in the earth, the sprout shoots upward. But it does not separate off the solid matter, does not make wood; it remains like a cabbage stalk. The leaves come out directly on the circumference, in spirals, the cambium is formed directly in the interior, and the *Sulphureous* cambium takes everything back to the earth with it. So that in the annual plants the whole process occurs much more quickly. In the tree, only the hard parts are separated out, and not everything is destroyed.

The same process occurs in ordinary plants too, but is not carried so far as in trees. In the tree it is a fairly complicated matter. When you look at the tree from above, you have first the pith inside: this gives the direction. Then layers of wood form round the pith. Towards the autumn the gum appears from the other side, and fastens the layers together. So we have the gummy wood of one year. In the next year this is repeated. Wood forms somewhere else, is again gummed together in the autumn, and so the yearly rings are formed. So you see everything clearly if only you understand that there are three things: wood sap, life sap, and cambium. The wood sap is the most fluid, it is really a chemical; the life sap is the giver of life; it is really, if I may so express myself, a living thing. And as for the cambium, there the whole plant is

sketched out *from what the Sulphureous Cosmic Substance receives from the stars*. It is really so. The wood sap rises and dies, then life again arises; and now comes the influence of the stars, so that from the thick, sticky cambium the new '*female*' plant is sketched out. In the cambium one has a sketch, a sculptural activity. The stars model in it from the whole universe the complete plant form. So you see, we come from Life into the Spirit. What is modelled there is modelled from out of the World-Spirit *by Chlorine*. The earth first gives up her life to the plant, the plant dies, the air environment along with its light once more gives it life, and the World Spirit implants the new plant form. This is preserved in the seed and grows again in the same way. So that one sees in the growing plant how the plant world rises out of the earth, through death, to the living Spirit.

Wood sap develops in man as the ordinary colourless mucus. Wood sap in plants is, in man, mucus. The life sap of the plant which circulates from the leaves, corresponds to the human blood. And the cambium of the plant corresponds to the milk and the chyle in the human being. When a woman begins to nurse, certain glands in the breast cause a greater flow of milk. Here you have again something in human beings which is most strongly influenced by the stars, namely, *milk*. Milk is absolutely necessary for the development of the brain — the brain, one might almost say, is solidified milk. Decaying leaves create no proper *Sulphureous* cambium because they no longer have the power to work back into the proper warmth. They let *Sulphur's* warmth escape outwards from the dying edges instead of sending it inwards. We eat these plants with an improperly developed cambium: they do not develop a proper milk; the women do not produce proper milk; the children get milk on which the stars cannot work strongly, and therefore they cannot develop properly. (3)

Cosmic Male Seed — Cosmic Forces, Spirit stream

Now for the tilling of the soil one important thing should above all be understood. We must know the conditions under which the cosmic spaces are able to pour their forces down into the earthly realm. To recognise these conditions, let us take our start from the seed-forming process. The seed, out of which the embryo develops, is usually regarded as a very complicated molecular structure, and scientists are especially anxious to understand it in its complex molecular structure. In simple molecules, they imagine, there is a simple structure; then it grows ever more complicated, till at last we get to the infinitely complex structure of the protein molecule.

With wonder and astonishment they stand before what they imagine as the complicated structure of the protein in the seed. For they conceive it as follows. They think the protein molecule must be extremely complicated; for after all, out of its complexity, the whole new organism will grow. The new organism, infinitely complex as it is, was already pre-figured in the embryonic condition of the seed. Therefore this microscopic or ultra-microscopic substance must also be infinitely complex in its structure.

To begin with, to a certain extent this is quite true. When the earthly protein is built up, the molecular structure is indeed raised to the highest complexity. But a new organism could never arise out of this complexity. The organism does not arise out of the seed in that way at all. That which develops as the seed, out of the mother-plant or mother-animal, does not by any means simply continue its existence in that which afterwards arises as the descendant plant or animal. That is not true. The truth is rather this:— When the complexity of structure has been enhanced to the highest degree, *by the Cosmic Substance*, it all disintegrates again, and eventually, where we first had the highest complexity attained within the Earth domain, we now have a tiny realm of chaos. It all disintegrates, as we might say, into cosmic dust. Then, when the seed — having been raised to the highest complexity — has fallen asunder into cosmic dust and the tiny realm of chaos is there, then *Argon allows* the entire surrounding Universe *to* begin to work and stamp itself upon the seed, thus building up out of the tiny chaos that which can only be built in it by *Phosphoric Cosmic* forces pouring in from the great Universe from all sides. So in the seed *during pollination*, we get an image of the Universe.

In every seed-formation, the earthly processes of organisation is carried to the very end — to the point of chaos. Time and again, in the chaos of the seed the new organism is built up again out of the whole Universe. The parent organism has to play this part: through its affinity to a particular cosmic situation, it tends to bring the seed into that situation whereby the *Phosphoric Cosmic* forces work from the right cosmic directions, so that a dandelion brings forth, not a barberry, but a dandelion in its turn.

That which is imaged in the single plant, is always the image of some cosmic constellation. Ever and again, it is built out of the Cosmos. Therefore, if ever we want to make the *Cosmic* forces effective in our earthly realm, we must drive the earthly as far as possible into a state of chaos. For plant-growth, Nature herself will see to it to some extent, that this is done. However, since every new organism is built out of the

Cosmos, it is also necessary for us to preserve the cosmic *force* process, *carried by the primary Saturn stream*, in the organism long enough — that is, until the seed-forming process occurs once more, *if we wish to maintain true species expression*. (5)

Undines carry the action of *Magnesium and Sodium* into the chemical ether, *and the Earthly Forces* into the plants, sylphs the action of *Chlorine* and the light-ether *and Cosmic Substance* into the plant's blossoms. And the pollen now provides what may be called little air-ships, to enable the *Phosphorus inspired* fire-spirits to carry *the Cosmic Force* warmth into the seed. Everywhere warmth is collected with the help of the stamens, and is carried by means of the pollen from the anthers to the seeds and the seed vessels. And what is formed here in the *Cosmic Force* *drenched* seed-bud is entirely the **male element** which comes from the cosmos. It is not a case of the seed-vessel being female and the anthers of the stamens being male. In no way does fructification occur in the blossom, but only the pre-forming of the male seed. (4)

The **Phosphoric fructifying force** is what the fire-spirits in the blossom take from the warmth of the world-all as the cosmic male seed, which is united with the female element. This *female* element, drawn from the forming of the plant has, as I told you, already earlier seeped down into the ground, *during the Sulphur phase as the ideal form made possible from that seasons growth processes*, and is resting there below. For plants the earth is the mother, the heavens the father. And all that takes place outside the domain of the earth is not the mother-womb for the plant. It is a colossal error to believe that the mother-principle of the plant is in the seed-bud. The fact is that this is the male-principle, which *are phosphorus strengthened Cosmic Forces* drawn forth from the universe with the aid of the fire-spirits. The mother comes from the cambium, *via the Sulphur enhanced Cosmic Substance*, which spreads from the bark to the wood, and is carried down from above as ideal form. And **what now results from the combined working of gnome-activity and fire-spirit activity — this is Silica's fructification**. The gnomes are, in fact, *Silica's* spiritual midwives of plant-reproduction. *Silica's fructification takes place below in the earth during the winter, when the male seed comes into the earth and meets with the female forms* which the gnomes have received from the activities of the sylphs and undines and now carry to where these forms can meet with the fructifying seeds.

You see, because people do not recognize what is spiritual, do not know how gnomes, undines, sylphs and fire-spirits — which were formerly called salamanders — weave and live together with plant-growth, there is complete lack of clarity about the process of *Silica's* fructification in

the plant world. There, outside the earth nothing of fructification takes place, but the earth is the mother of the plant-world, the heavens the father. This is the case in a quite literal sense. Plant-fructification takes place through the fact that the gnomes take from the fire-spirits, *Phosphorus's Cosmic Forces* which the fire-spirits have carried into the seed bud as concentrated cosmic warmth on the little airships of the anther-pollen. Thus the fire-spirits are the bearers of warmth.

Once Again

And now you will easily gain insight into the whole process of plant-growth. First, with the help of *the Phosphoric Cosmic Forces* coming from the fire-spirits, the *Silicious* gnomes down below instill *the Earths Aluminum* influenced *Earthly Substance* life into the plant and push it upwards. They are the fosterers of life. They carry *Aluminum's* life-ether and *Earthly Substances* to the root — the same life-ether in which they themselves live. The undines foster *Magnesium and Sodium's* chemical ether and *the Earthly Forces*, the sylphs the light-ether and *Sodium and Chlorines Cosmic Substance*, the fire-spirits the warmth ether and *Phosphorus' Cosmic Forces*. And then the fruit of the warmth-ether and *Cosmic Forces* again unites with what is present below as life ether and *Earthly Substance*. Thus the plants can only be understood when they are considered in connection with all that is circling, weaving and living around them, and one only reaches the right interpretation of the most important process in the plant when one penetrates into these things in a spiritual way.

When once this has been understood, it is interesting to look again at that memorandum of Goethe's where, referring to another botanist, he is so terribly annoyed because people speak of the eternal marriage in the case of the plants above the earth. Goethe is affronted by the idea that marriages should be taking place over every meadow. This seemed to him something unnatural. In this Goethe had an instinctive but very true feeling. He could not as yet know the real facts of the matter, nevertheless he instinctively felt that fructification should not take place above in the blossom. Only he did not as yet know what goes on down below under the ground, he did not know that the earth is the mother-womb of the plants. But, that the process which takes place above in the blossom is not what all botanists hold it to be, this is something which Goethe instinctively felt.

You are now aware of the inner connection between plant and earth. But there is something else which you must take into account.

You see, when up above the fire-spirits are circling around the plant and

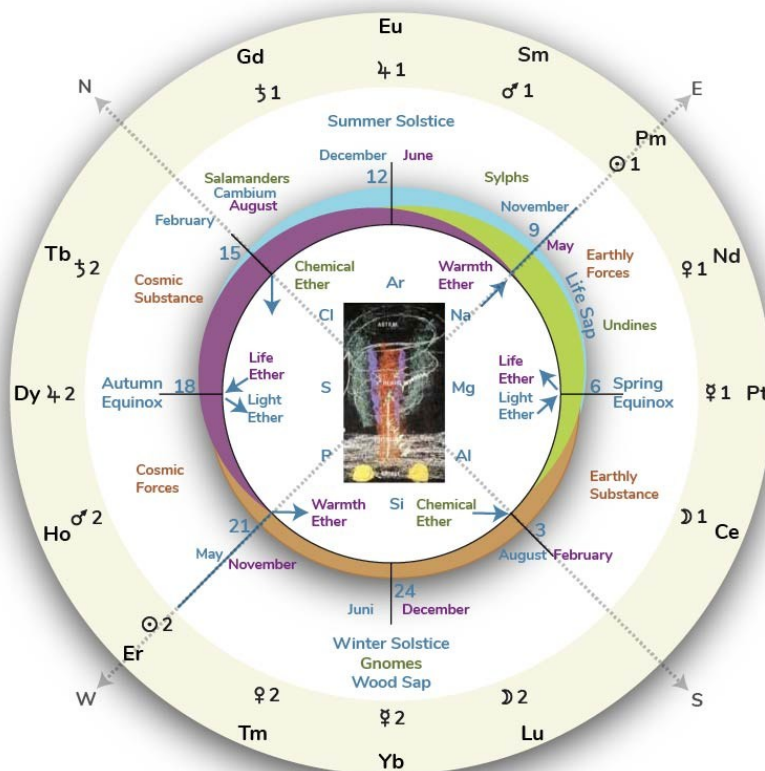
transmitting *Phosphorus's archetypal Saturn 1 Cosmic Forces* to the anther-pollen, then they have only one feeling, which they have in an enhanced degree, compared to the feeling of the sylphs. The sylphs experience their self, their ego, when they see the birds flying about. The fire-spirits have this experience, but to an intensified degree, in regard to the butterfly-world, and indeed the insect-world as a whole. And it is these fire-spirits which take the utmost delight in following in the tracks of the insects' flight so that they may bring about the distribution of warmth for the seed buds. In order to carry the concentrated *male Cosmic Force* warmth, which must descend into the earth so that it may be united with the *female* ideal form, in order to do this the fire-spirits feel themselves inwardly related to the butterfly-world, and to the insect-creation in general. Everywhere they follow in the tracks of the insects as they buzz from blossom to blossom. And so one really has the feeling, when following the flight of insects, that each of these insects as it buzzes from blossom to blossom, has a quite special aura which cannot be entirely explained from the insect itself. Particularly the luminous, wonderfully radiant, shimmering, aura of bees, as they buzz from blossom to blossom, is unusually difficult to explain. And why? It is because the bee is everywhere accompanied by a fire-spirit which feels so closely related to it that, for spiritual vision, the bee is surrounded by an aura which is actually a *Phosphoric* fire-spirit. When a bee flies through the air from plant to plant, from tree to tree, it flies with an aura which is actually given to it by a *Phosphoric* fire-spirit. The fire-spirit does not only gain a feeling of its ego in the presence of the insect, but it wishes to be completely united with the insect.

Through this, however, insects also obtain that power about which I have spoken to you, and which shows itself in a shimmering forth of light into the cosmos. They obtain the power completely to spiritualize the physical matter which unites itself with them, and to allow the spiritualized physical substance to ray out into cosmic space. But just as with a flame it is the warmth in the first place which causes the light to shine, so, above the surface of the earth, when the insects shimmer forth into cosmic space, it is the fire spirits which inspire the insects to this activity, the fire-spirits which are circling and weaving around them. But if the fire spirits are active in promoting the outstreaming of spiritualized matter into the cosmos, they are no less actively engaged in seeing to it that the concentrated fiery element, the concentrated warmth, goes into the interior of the earth, as *Phosphoric Cosmic Forces* so that, with the help of the *Silicious* gnomes, the spirit-form, which sylphs and undines cause to seep down into the earth, may be awakened *through the Winter Fructification, of the Cosmic Forces and Earthly Substance to form the Wood Sap.* (4)

Another Extension

Just as the Hauschka Elements could be found in the Periodic Table and then extended to all the other chemical elements via their Arms families, (pg 69) so I wonder what can be done when we extend the references to the Lanthanides. These are elements on the sixth ring of the Periodic Table, which suggests they work with Internal Spirit influences. These would be helping with 'species expression' in plants.

I have done 'provings' of the Lanthanides and found them to be very active influencers. Mostly due to my efforts to control a 'rash' that surfaces each year in November on my arms, I had found that Mars 1 / Samarium applied topically would reduce the itching. When I extended the mineral references within the Seasonal Complex picture, I find that in November when the Warmth Ether is becoming more expressed in Nature, one of the indicated elements for this time is Samarium. When taken it internally, once every few weeks, only a very slight rash developed. This suggests this reference may well have value for helping with seasonal changes. So I offer the following diagram as a reference for this application.



The Seasonal Complex and the Lanthanides