

WEEKLY ALMANAC

1834	SUN	MOON	H W	Watch
OCT 31	11 24	5 36	10 37	4 10 12 36
NOV 1	10 25	5 35	11 40	5 7 12 52
NOV 2	11 26	5 34	morn.	6 50 13 9
NOV 3	12 27	5 33	0 45	7 53 13 23
NOV 4	1 28	5 32	1 50	8 40 13 37
NOV 5	2 29	5 30	2 52	9 32 13 51
NOV 6	3 29	5 28	3 55	9 58 14 5

SUN'S DECLINATION, 9th 6° 15' 28" South.
 DO. RIGHT ASCENSION, 12h 56m 31s Ap. N.
 VENUS—SETS, 7h 6m — P. M.
 MARS—RISES, 9h 49m — P. M.
 JUPITER —, 7h 52m — P. M.
 GEORGIAN—SOUTH, 8h 30m — P. M.

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SAINT ANDREWS MAIL

Departs for	
St. John,	Tuesday, at 10 a. m. and by Steam Boats.
Saint Stephen,	Tuesdays and Thursday, at 10 a. m.
United States	Mon. Wed. Frid. at 10 a. m.
Arrives from	
St. John,	Monday, 10 a. m. and by Steam Boats.
St. Stephen	Wed and Fri. at 4 p. m.
United States	Mon. Wed. Frid. at 2 p. m.

GEO. FRED. CAMPBELL P. M.

PERSEUS, commonly called the cluster of seven stars.
 RISES — 9h 53m — P. M.
 SOUTH — " 2h 39m — morn.
 MOON FIRST Q. — " 11h 20m — P. M.

PRACTICAL ASTRONOMY
 CONTINUED.

(1) URSA MINOR: We commence a descriptive account of the Constellations, with *Ursa Minor*, or *Cynosura*, the Little Bear; as in the extremity of its tail is situated that star which is nearest the north pole of the world, and which is commonly called the *Polar Star*. It is absolutely necessary to know the place of this star intimately: it may be very readily found by tracing an imaginary line from the two bright leading stars of *Ursa Major* to an equally bright star nearly in a direct line with them, and at about four times the distance from them that they are from one another. These two bright stars are called the *Pointers*, well known to navigators. *Ursa Major* is sometimes called the *Plough*; the peasantry in England call it *Charles's Wain*; and here we have heard it, not inappropriately, called the *Dipper*.

In the course of our descriptions, we shall have frequent occasion to account for the names of stars and constellations by referring to the mythology of the ancients, and to the fable as well as history of the transactions of the East, the birth place of Astronomy. These references given in a detached manner will often border on the absurd, particularly to those who are not versed in the poetical fancies of the pantheon, but it is wonderful how beautifully the fictions are contrived to correspond with real facts in authentic history, and how ingeniously they are adapted to the appearance of nature, and the coincident apparent revolution of the stars.

The constellation with which our descriptions begin, represents, according to the poetry of the skies, *Arkas* the son of *Jupiter* and *Calisto*, who changed the name of *Pelagia* to *Arabis*, and taught his people the art of agriculture and spinning of wool. *Juno*, being jealous of *Jupiter*, changed *Calisto* into a bear, but *Jupiter* transferred her to the heavens with her son *Arkas* under the figure of a *Bear*. It is to be remarked that the ideal figures which fancy has formed the stars into as constellations, are often at variance with nature; as in respect to the great and little bears, each is represented with a long, bushy, curved tail.

This constellation embraces the Pole of the world, and is easily distinguished by seven stars in the same form, but in a contrary position to those of the *Wain*, in the Great Bear.

Boundaries and Contents.—W. and N. by *Draco*, E. by *Camelopardalis*, and S. by *Cassiopeia* and *Perseus*. It extends from the North Pole to the Arctic Circle, and contains 24 stars, viz. one of the 2d magnitude, two of the 3d magnitude, four of the 4th, &c.

The chief star *Aruccabah*, denominated the *Polar Star*, is at the extremity of the *Bear's* tail. An imaginary line drawn through the centre square of the Great Bear, perpendicular to the sides, will point out the bright star in the square of the Little Bear. This star is called *Kochab*, from *Kutab*, a hinge or axle; between this star and *Aruccabah* we find three other stars forming an arc. The two stars on the breast of the Little Bear, are called the *Guards*, or *Wardens* of the Pole.

Cynosura, from the earliest times of commerce and navigation, has been known to mariners, as it affords an easy method of determining the ship's course, and the latitude of any place N. of the Equator. The *Polar Star* has at present 10h. 53m. 24s. Right Ascension; and 89° 25' 26". North declination; it is therefore 1° 34' 34" from the true place of the pole. Hence, if the Altitude of this star is found by a quadrant, or any proper instrument, when on the meridian above the pole, and the complement of the *Polar* declination be subtracted from that altitude, the remainder will be the latitude of the place where the observation was made; or if added to its altitude when on the meridian under the Pole, the sum will be the observer's latitude.

(2) *CASSIOPEIA* is represented as the wife of *Cepheus* and Mother of *Andromeda*. This constellation is called *El Seder*, the cedar tree by *Ulug Beig*.

Boundaries and Contents.—N. by *Taurus*, E. by *Camelopardalis* and *Perseus*, S. by *Andromeda*, and W. by *Cepheus*. This constellation, situated between 45° and 75° N. declin. passes vertically over this Province and a large portion of the *Canadas*. It lies between 347° and 65° right ascension. It contains, 55 stars, viz. five of the 1st magnitude, five of the 4th, &c.

The head and body of this lady are placed in the *Milky Way*, her right foot resting on the Arctic Circle. Relatively to the two Bears, *Cassiopeia* is placed opposite to the space between them, and she is very easily distinguished by five stars of the 3d magnitude and imagination transforms them into the profile of an antique chair. A line drawn from the middle star in the tail of *Ursa Major* by the *Polar* star, will point out *Schedir*, on the breast of *Cassiopeia*. Below, in the *Milky Way* we find a very grand nebula, consisting of a mass of small stars, mixed with a nebulousity. This cluster appears like a solid ball

composed of small stars, quite compressed into one blaze of light, with a great number of loose ones surrounding it.

In the year 1572, *Tycho Brahe* discovered in this constellation, a new star which shone with more light than *Venus*, till 1574, when it disappeared entirely.

Schedir has now 55° 37' 40" north declination, and 0h 31m 10s right ascension: it has 79° 25' altitude when on the meridian of St. Andrews, and will come to our meridian on the first day of every month as shewn in the following table:

Mo.	Ho.	Min.	Ho.	Min.	
January	5	48	July	5	46
February	3	38	August	5	45
March	1	44	September	1	48
April	11	45	October	11	56
May	9	53	November	10	6
June	7	50	December	8	5

As *Schedir* never sets to us, it will appear near the zenith at these hours during one half of the year and near the horizon at the same hours during the other half year.

ACCOUNT OF THE GLOBE
 CONTINUED.

Earthquake—The connexion between earthquakes and volcanic eruptions is now almost universally admitted. They frequently occur simultaneously, and seem to be the effects of some cause as yet unknown to us. Every theory which has hitherto been offered as explanatory of the phenomena, is liable to serious objection in one respect or another—Earthquakes produce a motion of the ground, sometimes tremulous, and at other times undulatory; the latter is by far the most dangerous, and frequently spreads devastation far and wide. Instances of the destructive effects of earthquakes must be familiar to our readers, and scarcely to require to be mentioned here. The shock of an earthquake is sometimes felt over an immense circumference. That of *Lisbon*, in 1755, sent its undulations over nearly the whole of Europe, and even as far as the West Indies and the continent of America. Vast tracts of country have occasionally been elevated by earthquakes. The Coast of *Chili*, in South America, to the extent of one hundred miles in length, was raised three or four feet in consequence of the earthquake which took place in 1822. In Mr *Lyell's* able work on geology, there is a great mass of evidence which goes to prove that earthquakes have produced such elevations in other places, and that depressions have likewise taken place. The following instance of such an occurrence will be read with interest.—In the year 1692, the Island of *Jamaica* was visited by a violent earthquake; the ground swelled and heaved like a rolling sea, and broke into rents, in which many people were engulfed, and some of them were vomited forth again, along with great quantities of water. Three quarters of *Port Royal*, then the capital sunk down, with their inhabitants, entirely under water; and after the earthquake had ceased, the chimney tops of houses were seen just projected above the waves. A tract of land round the town, about a thousand acres in extent, sunk down in less than a minute, during the first shock, and the sea immediately closed over it.

Hurricanes—The terrible violence of these visitations is well known. The velocity with which they travel, and the deluges of rain with which they are accompanied, effect considerable changes on the surface of a country. Whole towns are sometimes scattered in that confusion which the playthings of a child present, when, in a fit of anger, it strews them about, and tramples upon them. Not only buildings and animal life are destroyed, but whole forests are swept to the deep.—A large amount of terrestrial animals and vegetables, along with the land-debris, must, upon these occasions, be hurried into the ocean, and there deposited. Hurricanes are sometimes accompanied with submarine earthquakes. In *Jamaica*, in 1780, during a storm, a great wave burst upon *Savanna la Mar*, and swept the whole town away in a moment, leaving "not a wreck behind."

Springs—Springs are generally impregnated with the various kinds of matter, which they deposit in abundance. Many springs have the power of changing vegetable matter into a fossil, or stone. This process of petrification, as it is called, is carried on to a great extent in the hot springs of *Furnas*, of which *Dr Webster* gives this account.—He found "branches of the ferns which now flourish in the island completely petrified, preserving the same appearance as when vegetating, except the colour, which is now ash-grey." Fragments of wood occur more or less changed; and one entire bed, from three to five feet in depth, is composed of the reeds so common in the island, completely mineralized the centre of each joint being filled with delicate crystals of sulphur." *Travertine* is a substance somewhat of the same description, and is to be found deposited from springs in layers of immense thickness. Those of *Tivoli* present an extraordinary accumulation of horizontal beds from four to five hundred feet thick. The *Bakie Loch*, in *Forfarshire*, produces a marl used in the agriculture of the country. Mr *Lyell* is of opinion that it was immediately due to the shell-fish of the Lake

which derive the lime either from the water or the food which they live upon, and that dying, their remains accumulate into heaps of shell marl. This was converted into rock, by the action of life-water, which was impregnated with an acid. Certain springs deposit a pitche substance, called *asphaltum*; and others are covered with a combustible fluid, called *naphtha*, which floats upon the top.—Those of *Rangoon*, in a province of the *Burma* empire, are said to produce 92,781 tons a year.

Coral Reefs and Islands—These are the works of myriads of small insects, called corals, they occur in various parts of the world, but are most numerous in the Pacific Ocean and Indian seas. Their extent is sometimes almost incredible. On the coast of *New Holland*, there is a coral reef, which stretches out to a thousand miles in length. The Pacific Ocean is studded with coral islands, some of which are of considerable magnitude. Corals do not commence their laborious operations at a great depth below water; from 60 to 100 feet is considered the utmost extent to which the islands extend downwards.—They are generally of a circular or oval shape and Mr *Lyell* is of opinion that corals build upon the rims and in the crevices of submarine volcanoes. The outer wall of the building emerges first above the waves, enclosing a pool of tranquil water. The seeds of vegetables are either brought there by sea birds, or wafted by the ocean, and the islands soon become clothed with a mantle of green. The substance of which these islands and reefs are composed, is lime, which the corals extract from the sea-water, and cement together with a glutinous matter contained in their bodies. Mr *Lyell*, while surveying the *Isthmus of Panama*, detached a quantity of these animals, and placed them on some rocks in a shallow pool of water. On returning to remove them a few days afterwards, he found they secreted stony matter, and had firmly glued themselves to the bottom.

Submarine Forests—This name has been applied to those accumulations of wood and plants which are laid bare at the retreat of the tide, and are covered at high water.—There are several both in *England* and *Scotland*. One occurs in the *Firth of Tay*, another in the *Firth of Forth*, at *Largo Bay*, and in the island they are numerous. On the west coast of the mainland of *Orkney*, one was discovered, which has been thus described:—"Stems of small fir trees, ten feet long and five or six inches in diameter, are found partly imbedded in, and partly resting on, the surface of an accumulation of vegetable matter, principally composed of leaves. The stems were still attached to the roots, and the whole was greatly decayed, so as to be easily cut with the spade." At *Mount's Bay*, in *Corwall*, there is a submarine forest. The vegetable bed consists of a brown mass, composed of the barque twigs, and leaves of trees which would appear to be almost entirely hazel. Intermixed with this are numerous branches and trunks of trees. At a foot beneath the surface of this bed, the chief part of the mass consists of leaves, amongst which are an abundance of hazel nuts. In this layer, there are filaments of mosses, and portions of the stems and seed-vessels of small plants. Fragments of insects of the beetle tribe were also dug up, which at first displayed the most beautiful shining colours, but these small objects crumbled to dust on being exposed to the air.

Taking these facts in connection with the raised beaches and masses of shells, which are not unrequent, it would appear that the relative position of land and water has been changed at some remote period by earthquakes, as we have seen was the case in *Chili*. It is impossible that trees and vegetables could have grown where they are now found, with the sea breaking over them. Besides their occurrence in other places, there are at *Plymouth* the remains of a beach, over which the sea has, without doubt, formerly flowed; it is now, however, at an average, thirty-three feet above it, clearly indicating that some internal convulsion has either raised the land, or sunk the bed of the ocean. In the *isle of Jura*, in the *Hebrides*, there are six or seven terraces, or lines of beach, which appear to have been successively upheaved above the present level of the sea.

CAUSE OF THE DISEASE IN THE POTATOE CROP.

In 1832, we planted about eleven acres of potatoes, and we were surprised to find that from three to four acres turned out nearly a total failure. The common symptoms which have been so frequently mentioned were observable throughout—rotten seed and abundance of maggots, or worms. Last year, we laid down about fourteen acres, of which about one half, say seven acres, failed in the same manner as they had done the year before. We observed that there were generally five furrows, or drills, next to each other, which shared one fate. Whether healthy, partially or wholly destroyed, these five drills exhibited almost uniformly the same appearances. Sometimes half the length had a healthy appearance, and the other half length of these five drills presented a complete blank.

From these appearances we are led to recollect that, in planting there had been five persons employed, one to each drill; and we could not resist the conclusion that the failure was in the seed. On digging up these we found them mostly dead, rotten, and full of worms, with a few exceptions; where, although the disease had spread to a certain extent, it had not reached the eye of the potatoe, and from such a feeble stem was sent forth, which however, the seed was unable to nourish until it could strike roots into the ground and rise to the surface. The stem therefore as if by a dying effort, produced a small potatoe on its top, from which leaves began to spring out after the seed potatoe had ceased to afford nourishment to the original shoot. These, however never came to anything; and we only mention it as a singular circumstance which no writer that we have observed has taken any notice of.

We had adopted the plan common in the country of cutting potatoes for seed two or three weeks before planting. These were generally stowed in heaps in a shed, or by the side of the pit; and in these heaps, it is our settled conviction, the seed was damaged by heating. In the months of April and May, of both years, the heat of the sun was great, while we had frequent warm showers; and we are settled in the belief that these, combining with the natural sap exuding from the cuts, produced heating in the seed heaps to such an extent as, for the most part, to destroy the vegetable principle. After discovering the failure, we filled up the blanks about the middle of June, by dibbling in fresh seeds. These came through the ground without any exception; and notwithstanding the late period of the season, of an average produce from a half to a two-thirds crop. Profiting by our past experience, and, as we believed, ascertained the cause of the failure, we cut the seed this season on the same day, or evening before they were put into the ground, and we have, in consequence, scarcely one blank visible over a field of fourteen acres.

We shall now endeavour to prove that the failure in our own case proceeded from the heating of the seed, and afterwards attempt to show that to this cause the failure of this crop throughout the kingdom may be rationally and satisfactorily traced.

We have already said the seed was laid up in heaps, the five persons employed in planting filled their baskets, at one time taking from the outside and at another from the centre of the heap. The seed taken from the outside, being destroyed entirely by heating, produce nothing; and thus we account for the uniform appearance of five, ten, fifteen, or twenty drills (always in fives)—whether healthy, weakly, or a blank, they shared one fate. Besides, it is very common to see, on opening a potatoe-pit in the spring, that all, or the greater part of the potatoes, have more or less vegetated. This fact is decisive wherever it appears, as to the healthy state of the potatoes, and such was the case with ours last year. They were growing before being cut—they died after it. On what principle, but that of heating, can such a fact be accounted for? Moreover, our second planting succeeded. But had the potatoes themselves been diseased before cutting, what good could arise from re-planting diseased seed? And the fact that second planting has succeeded, proves that there is no inherent disease in the root; and the success of this plan, as we believe, is to be accounted for in this way—that the utmost despatch was made to get the seed into the ground, and thus they were not allowed to lie after cutting, until they were heated. We think we have said enough to show that, in our own case, heating was the cause of the failure. We shall now endeavour to apply this principle to the alleged disease, as it has appeared in various parts of the kingdom; but it will first be necessary to make a general remark or two.

There are various ways in which potatoes may be heated, and the vegetable life thereby destroyed: Too large quantities stored in pits—putting them when wet from rain—or stowing them under rain, in the hold of a vessel for exportation.—Whole potatoes are in much less danger of heating, than those which are cut.—*Huntley July 22d, 1834*

From the *Liverpool Chronicle*, Aug. 16th

WHAT WILL THE LORDS DO NEXT.—The question used to be "What will the Lords do?" but they have done so much lately that the enquiry now is, "What will the Lords do next?"

Stunned by the passing of the Reform Bill, they remained for a time dubious what course to pursue; but on recovering from their stupor they grew as it were ashamed of their own pusillanimity. In the bitterness of self accusation, they magnified their own resources and overlooked the causes of their own humiliation. At one moment they deemed an accession to office possible; but when the opening occurred they were obliged to acknowledge their incapacity, or at least the incompatibility of their principles and public opinion. Wounded in their pride they did all that little minds could do—they resolved to make every measure of the ministry whose places were offered them, but whose places they de-

clined. A bill for emancipation the Jews was sent up to them, and they threw it out.—this was perfectly consistent with torism, but it was a rebuke to the Commons who had passed it. The next bill of note, was for admitting dissenters to University privileges, and this too they rejected. A second insult to the representatives of the people. Another bill of less moment reached their lordships' house; it declared, in one of its clauses, that coroner's courts were open courts. The peers hated open court reports, and reporters, and omitted the clause. These were political straws that indicated the point from which the wind blew; and at length came the test—the *Irish Tithe Bill*.

This bill was introduced in the early part of the Session, but its progress resembled the mutations of a butterfly. From a mere grub it grew into a beauty all redolent of joy and sunshine. At its completion it approximated to perfection, and was admirably calculated to restore tranquility to Ireland by removing all topics of local vexation from the agitators. It rendered landlords and not tenants responsible for the payment of tithes; and to induce them the more willingly to pay them, it reduced the assessment of 1830 forty per cent. That is, the landlord paid £60 where the valuation was £100, and he recovered the £60, from the tenant in the shape of rent. The farmer therefore was a great gainer, for he had his tithes reduced nearly one half; and the tithe owner lost nothing; for in addition to the £60 he got £20 more from the consolidated fund, the £20 to be made good out of the savings resulting from the diminution of bishoprics. &c. &c. Thus the person where £100 was due, got £80; and he got this without either trouble or expense; he got it without either proctor or driver; and it may be fairly presumed that it was more than ever he got under the old system.

Well, this bill of peace their lordships in their wisdom rejected, and what will be the consequence? In the first place, it is an act of collision between the two Houses of Parliament; and in the second place, it has virtually ruined the *Irish clergy*. The Commons manifested their feelings by refusing to accept the *Coroner's Court Bill*, entering the same time into a resolution declaring *Coroner's Courts* open Courts; and in the furtherance of the same spirit, ministers assured that the military in Ireland should not assist in the collection of tithes further than in preserving the peace.

What will the people of Ireland do? They will, it is believed, persist in their doctrine of passive obedience and refuse to pay tithes; the tithes are, in fact, virtually extinct; the clergy are left to their former resources, for there is no second million to draw on. Will the people pay? They refuse at this moment, and that too with improved tactics. A *Rev. Mr. Whitty* in the county of *Wicklow*, at this moment aided by a hundred soldiers, forty policemen, and an army of drivers and protectors endeavouring to recover his tithes. At first he moved on the refractory peasants to *Carlow*, but his approach was telegraphed along the hills; but in the hope of stealing a march on them he concentrated his forces at *Balinglass*, within a few miles of *Dublin*. The enemy, however were on the alert. As he got ready, an old woman went out and hung up a sheet as if to dry. The signal was understood, a faggot blazed on the mountain, and the refractory tithe-refusers prepared for the approach of the tithe-seekers. There was nothing for them. The clergy may therefore curse in their hearts their conservative friends, for their case is now desperate, and God only knows what kind of bill the Lords will next session be constrained to pass. The Commons are masters of the field, and the Peers must now resist a Premier so infinitely more potent. It is now a confirmed conviction that the Lords must be reformed.

ANIMALS TURNED AUTHORS—If animals were to turn authors, the eagle would excel in epic, and the sheep in pastoral poetry. The elephant would produce an excellent treatise on philosophy—the horse employ his genius on chivalry—the cow on agriculture—and the dog cut a figure in the drama. The writings of the monkey would abound in satire and burlesque; while the cat would be distinguished for the sarcasm, envy, and dissimulation of his composition. The style of the lion would be bold, abrupt, and Pindaric; while the gender would be remarkable for the extreme verbosity and diffuseness of his language. The beaver would probably attempt a treatise on the medical effect of perfumes, the turkey a dissertation on the mock heroic. The genius of the owl would exhibit itself in the composition of elegies, epitaphs, and solemn dirges that of the bear in an essay on walking. As for the hog, he could never excel in polite literature, but might favour the world with a critical analysis of the philosophy of Bacon. The magpie would be a notorious plagiarist—cabbaging ideas at all hands. As for the parrot he would not indulge much in written composition, but be fond of showing off as a public speaker. For composing political harangues, as these would be unrivalled.