ga montium lunarium distinguebantur, nec lata admodum nec profunda. Adhibita scala subtiliter divisa, æstimavi profunditatem unius vallis $\frac{1}{200}$ sive partem ducentesimam diametri lunæ.

4. Ultimæ phases decrescentes per tenues nubes visæ fuerunt, neque tamen ultra undecim disci solis uncias nobis luna occultavit.

5. Centri solis occasus pro horizonte Vitembergensi calculo tum fuerat repertus, $7^{h.}\ 39^{m.}\ 49^{se.}$ adeoque refractione radiorum in nubibus horizontis propemodum sex minutis fuit retardatus.

IV. *An Abstract of the* Meteorological Diaries, *communicated to the* Royal Society; *with Remarks upon them. By* W. Derham, *D. D. Canon of* Windsor, *F. R. S.* [PART II. Vide *Transact.* N° 429.]

PART III. *Containing Meteorological Observations made at*

Berlin
Sweden { Lunden, Bettna, Upsale, Bygdea, Pithea } 1726.

AN Abstract of *Meteorological Observations* made in the Year 1726, at *Berlin*, by the Society there, and communicated by *Joh. Theod. Jablonski*; and in *Sweden*, at *Lunden*, by *Conrad Quensel*, Mathematick Professor in the *Caroline* Academy;

Academy; and at *Bettna* in *Sudermanland*, by *Andr. Geringius*, Paſtor and Provoſt of the Place; and at *Upſale*, by *Eric Burman*, Aſtron. Profeſſor in the *Guſtavian* Academy; and at *Bygdea*, in *Weſtro-Bothnia*, by the late *Jacobus Burman*, Paſtor of the Place; and laſtly, at *Pithea*, in the ſame Province, by *Olave Burman*, and *Iſrael Steckſenius*, Students.

Theſe Obſervations have, with ſo great Judgment, Diligence and Care, been made, ſome twice, and ſome thrice every Day, that I wiſh they could be publiſhed as they are; but by reaſon they are too numerous and bulky to be capable of that, therefore I have contracted them as well as I could, to make them uſeful to the Society; and that not without a great deal of Trouble, by Reaſon of the Difficulty to give a tolerable brief Account of ſo great a Variety and Number of Obſervations, as are thoſe of the Winds, and their Strength, the Weather, the Barometer, Thermometer, *&c.* of ſo many Places, and ſo many times every Day in the Year.

The moſt uſeful of the *Barometrical* Obſervations I have repreſented in the following Table; which ſhews, at an eaſy View, the higheſt, loweſt, and mean Heights of the Quickſilver in every Month, at the ſeveral Places.

	JANUARY.				FEBUARY.			
	Berlin	Lun.	Bett.	Upſa.	Berlin	Lun.	Bett.	Upſa.
High.	29.3	30.0½	30.51	30.18	29.6	29.8¼	30.40	30. 2
Mean	28 7½	29.3⅛	29.92	29.58	28.6¼	29 1½	29.74	29.53
Low.	28.0¼	28.5¾	29.26	28.98	27.6¼	28.4¼	29. 8	28.86

MARCH.

	March.					April.				
	Berlin	Lun.	Bettna	Upſa.	Pithea	Berlin	Lun.	Bettna	Upſale	Pithea
High.	29. 0 3/4	30.0 1/2	30.50	30.24	30.11	28.10	29.9 1/2	30.48	30.17	29.98
Mean	28. 5	29.4 1/2	29.79	29.28	29.35	28. 5	29.5 3/8	29.86 1/2	29.66	29.27 1/2
Low.	27 10 1/2	28.8 1/2	29. 8	28.32	28.50	28. 0 1/2	29.2 1/4	29.25	29.15	28.57

	May.					June.				
	Berlin	Lun.	Bettna	Upſa.	Pithea	Berlin	Lun.	Bettna	Upſale	Pithea
High.	28.9 1/4	30.0 1/2	30.40	30.16	30.11	28.7 1/2	29.9 1/2	30.20	30.00	29.98
Mean	28.4 1/2	29.7 3/8	30.77 1/2	29.84	29.74 1/2	27.9 1/4	29.4 1/2	29.67 1/2	29.62 1/2	29.56 1/2
Low.	28.0 1/2	29.4 1/4	29.35	29.52	29.48	27.0 1/2	28.9 1/2	29.15	29.25	29.15

	July.					August.				
	Berlin	Lun.	Bettna	Upſa.	Pithea	Berlin	Lun.	Bettna	Upſale	Pithea
High.	28.5 1/2	29.6	30. 5	29.88	29.56	28. 8	29.8 3/4	30.30	29.98	29.86
Mean	28.2 3/4	29.2 3/4	29.70	29.54	29.37 1/2	28. 3 1/4	29.3 5/8	29.65 1/2	29.48	29.28 1/2
Low.	28.0 1/4	28.9 1/2	29.35	29.20	29.19	27.11 1/2	28.8 1/2	29. 1	28.98	28.71

	September.					October.				
	Berlin	Lun.	Bettna	Upſa.	Pithea	Berlin	Lun.	Bettna	Upſale	Pithea
High.	28.6	29.7 3/4	30.28	30.00	29.80	28.10	30.1 1/2	30.55	30.25	29.90
Mean	28.1	29.1 3/4	29.57 2	29.29	29.20	28. 3 1/2	29.1 7/8	29.57 1/2	29.28 1/2	29.05
Low.	27.8	28.5 3/4	28.87	28.58	28.60	27. 9	28.2 1/4	28.60	28.32	28.20

	November.					December.				
	Berlin	Lun.	Bettna	Upſa.	Pithea	Berlin	Lun.	Bettna	Upſale	Pithea
High.	29.1	30.1 1/2	30.80	30.51	30.19	29.1 2/3	30.0 1/2	30.50	30. 7	29.80
Mean	28.7	29.5 1/2	30.00	29.73	29.24	28.4 1/4	29.5 1/2	29.65	28.83 1/2	29. 0 1/2
Low.	28.1 1/4	28.9 1/4	29.20	28.90	28.29	27.8 1/4	28.4 1/4	28.80	28.60	28.21

Although this Table may give a good View of the *Barometrical Ranges* at the ſeveral Places in every Month of the Year 1726, yet I think it neceſſary to acquaint the Society with the great Agreement between the Aſcents and Deſcents of the ☿, ſometimes at the very ſame Time, and generally near it. If the ☿ was remarkably high or low, it was ſo in all, or moſt of the Places: If ſtationary for three or four, or more Days, it was the ſame in all. Only the Alteration would begin, or end, ſomewhat ſooner, or later, perhaps, in one place than another; and when any Deviation was from this

this Rule, it was commonly moſt remarkable in the *Pithea* Obſervations.

The *Thermometrical* Obſervations I can give no Account of, by reaſon I underſtand not the Thermometers there made uſe of, not the Freezing, Temperate, or other Points. Only the *Upſale* Thermometer (which was made by Mr. *Hauksbee*) muſt ſerve for all: In which the Point of extream Heat is marked five Degrees above 0; and ſo is graduated downwards to 45 Degrees, which is the Point of *Temperate*; and 65 Degrees, which is the Point of *Freezing*. The *Mean* of all the Degrees of every Month, at *Upſale*, the illuſtrious *Burman* hath noted according to Dr. *Jurin*'s Directions, in *Philoſ. Tranſ.* N° 379; which is, by adding the whole Month's Degrees, and dividing by the Number of Days. Which *Means* I have inſerted, as well as my own; mine being the *Means* between the higheſt and loweſt Degrees, as well of the *Thermometer* as *Barometer*. And becauſe I forgot to inſert the *Barometrical Means* of the illuſtrious *Lnnden* and *Pithea* Obſervers (which are according to Dr. *Jurin*'s way) but took only thoſe between the higheſt and loweſt Stations, therefore I have given this little Table of them.

A TABLE *of the Mean Barometrical Stations, by Dr.* Jurin's *way.*

JANUARY.		FEBUARY.		MARCH.	
Upſale	Pithea	Upſale	Pithea	Upſale	Pithea
29.76$\frac{10}{31}$		29.47$\frac{11}{14}$		29.51$\frac{3}{31}$	29.28$\frac{1}{18}$

April.		May.		June.	
Upſale	Pithea	Upſale	Pithea	Upſale	Pithea
29.76 $\frac{2}{5}$	29.49 $\frac{7}{15}$	29.91 $\frac{15}{31}$	29.82 $\frac{22}{31}$	29.59 $\frac{11}{15}$	29.49 $\frac{3}{5}$
July.		August.		September.	
29.53 $\frac{11}{31}$	29.38 $\frac{3}{15}$	29.54 $\frac{17}{31}$	29.27 $\frac{10}{31}$	29.34 $\frac{2}{10}$	29.14 $\frac{1}{6}$
October.		November.		December.	
29.43 $\frac{13}{31}$	29.11 $\frac{17}{30}$	29.81 $\frac{1}{10}$	29.49 $\frac{23}{30}$	29.66 $\frac{23}{31}$	29.19 $\frac{29}{31}$

A Thermometrical *Table of the Higheſt, Loweſt and Mean Stations at* Lunden *and* Upſale, *with the* Upſale *Means, according to Dr.* Jurin's *Method.*

January.				February.				March.			
	Lun.	Upſa.	Upſa.	Lun.	Upſale			Lun.	Upſale		
High.	79	96.		85	83.7			111	82.0		
Mean	58 $\frac{1}{8}$	74.8	81.2 $\frac{14}{31}$	65 $\frac{1}{2}$	74.3 $\frac{1}{2}$	74.1 $\frac{21}{28}$		84 $\frac{1}{2}$	67.5	69.1 $\frac{13}{31}$	
Low.	38	67.7		56	65			58	52.4		
April.				May.				June.			
High.	149	60. 9		187	47. 8			188	46. 7		
Mean	116	56.56	53.7 $\frac{17}{31}$	156	32.54	33.0 $\frac{3}{31}$		158 $\frac{1}{2}$	30.55	34.0 $\frac{7}{19}$	
Low.	83	43. 3		125	18. 1			129	15. 4		
July.				August.				September.			
High.	173	42. 4		156	52. 2			168	62.7		
Mean	146	32.54	33.7 $\frac{15}{30}$	134 $\frac{1}{2}$	41.60	43.5 $\frac{13}{31}$		133	50.4	43.5 $\frac{13}{31}$	
Low.	119	23. 4		113	32. 8			98	38.1		
October.				November.				December.			
High.	122	70.7		90	84.3			83	94. 8		
Mean	102 $\frac{1}{2}$	61.7	61.8 $\frac{27}{31}$	71	73.0	72.1 $\frac{1}{28}$		61	80.57	79.8 $\frac{1}{31}$	
Low.	83	52.7		52	62.3			40	67. 7		

By

By this Table, eſpecially by the *Upſale* Obſervations, it appears, that the colder Months in this Year 1726, were not ſo exceſſively cold, as their Northerly Situation would incline one to imagine, *Upſale* itſelf being 60 Degrees North. But by the Table, ſome of the Days in *January*, *February* and *March*, &c. at the beginning of the Year; and of *September*, *October*, *November* and *December*, at the latter end of it, may be obſerved to have had the Thermometer ſometimes not ſo low, or very little below the *Freezing Point*. In *January* and *December*, for Inſtance, when it was at 67.7, which was lower than in the other Months, it was not 3 Degrees lower than the *Freezing Point*, at 65 Degrees.

But by the beſt Judgment I could make of the *Berlin* Thermometrical Obſervations, they ſeem to have had no leſs, if not more ſevere Weather, than in the Northern Parts, particularly than at *Lunden*, *Upſale* and *Pithea*, where the Weather ſeems to have been milder than at *Betna* and *Bygdea*; at which two Places, I find they had frequently Showers and Storms of Snow, and more hard Weather than at the other *Swediſh* Places, or *Berlin*.

What the Cauſe of this different Warmth ſhould be, I leave others to judge, whether the Proximity of the Sea, or the Warmth of mineral Vapours, and the Guard of their Woods ſkreening off the cold Winds (which two latter I remember *Ol. Magnus* aſcribes much unto.)

But for the better judging of the State of every Month, be pleaſed to take this View, which the curious Author of the *Betna* Obſervations hath given, together

gether with ſome Remarks of my own, from the other Places.

In *January* he ſays, the Winter Cold (which was very intenſe from the 23d of *December* to the 15th of *January*) began to abate, to the Diſadvantage of the Ways and Travelling.

In *February* he ſays the Winter Weather continued all the Month, to the middle of *March*, with ſome Snow, and Froſt enough to benefit the Ways and Travelling.

March he ſays began with Snow, and ſtormy and grievous Cold; but towards the latter end, the Weather was milder, and more ſeaſonable to the Agriculture newly begun. On the 14th, and 17th, was an *Aurora Borealis*.

In this Month, on the 17th and 22d, at *Berlin* alſo there were Signs of *Auroræ Boreales*, as alſo on *February* 23d.

Alſo at *Upſale*, a *Lumen boreale* was on *February* 27th, *March* 3d, 15th, and 16th.

In *April*, *Betna* is ſaid to have had a ſeaſonable Seed-time; and that the autumnal Corn, which had eſcaped the *Worm* (a Calamity I find common in thoſe Parts as well as *England*) began now to flouriſh.

At *Lunden* they had *Parhelii* on the 28th and 29th. At *Upminſter* we had the *Aurora Borealis*, or *Streaming*, in the Evening, *April* 12th.

In *May*, the reverend and learned Obſerver at *Betna* takes Notice, that by the continual and pernicious Heat of the Sun in this Month, the Corn was ſo burnt up, as to be a ſad Preſage of an enſuing Scarcity, and Dearth of Proviſions.

And

And at *Upſale* alſo, and *Berlin*, they mention great Drought, and exceſſive Heat of the Sun. But in ſome Parts of the Month, the Air at *Berlin* is ſaid to have been coldiſh.

In *June* the violent Heats were abated, and the Seaſon more moiſt and rainy. The Corn being too ſoon ripe, cauſed their Harveſt to fall out at a very unuſual Seaſon.

At *Lunden* and *Berlin* it was cold ſeveral Days and irkſome.

July I find was a rainy Month at *Berlin*, and moſt of the *Swediſh* Places (*Pithea* the leaſt.) At *Betna* it was very unwelcome to the Harveſt-men. Much Thunder alſo and Lightening was in moſt of the Places, chiefly at *Upſale*.

In *Auguſt* I find a greater Agreement between the Winds than in the other Months, they, in moſt of the Places, blowing from ſome of the Points between the Weſt and South. At *Berlin* and *Upſale* was much Rain, at *Pithea* Thunder; and at *Betna* the beginning of the Month, being mild and fair, is ſaid to be a good Seed-time; but it is remarked, that for want of Rain the Seed came not up well.

September was a very rainy Month in all the *Swediſh* Places, very Cloudy, and ſome Miſty, and Snowy at *Pithea*; but at *Berlin* better Weather. At *Lunden*, a *Parhelius* on *September* 11th.

In *October* the *Swediſh* Places had many *Auroræ Boreales*. At *Lunden*, on *October* 8th, 12th, and 24th. At *Betna* on the 8th, 10th, 12th, 13th, 15th, 22d, 26th. At *Upſale*, on the 3d, 6th, and eſpecially the 8th. And the ſame Evening of *October* 8th, at *Upminſter*, we had a very remarkable whitiſh

whitiſh Liſt, or Girdle went croſs the Heavens, from Weſt by South, to Eaſt by North, about half a Degree broad; which continued but a little while, and then the whole Hemiſphere was covered with ſtreaming Vapours, in all Parts emitting Lances that pointed towards the Zenith, where they formed a Canopy; ſometimes reddiſh, ſometimes darker, and ſometimes blazing, as if ſet on Fire, and emitting Lances every way, ſo as to make an Appearance of the Star which the Knights of the Garter wear. This Canopy moved ſometimes ſome Degrees Eaſtward, and then would return back again near the Zenith. When the Vapours and Lances ſhone out moſt, I obſerved a ſtrange Commotion and Working in them, as if ſome large Body was behind them, and diſturbed them. This *Aurora Borealis* being different from thoſe that uſually appear, I was minded to take this Occaſion of mentioning it with others that were ſeen at the ſame Time in *Sweden*.

The Weather in this Month was Rain, and hoar Froſts in the *Swediſh* Places, with much Snow at *Bygdea* and *Pithea*; a *Parhelius* at *Lunden*, *October* 14th: And the illuſtrious *Betna* Obſerver ſaith, the Plenty of Rain this Month cauſed the Corn to thrive much; and he reckons the 31ſt Day of this Month to be then the firſt Winter Day with them, it being Froſty, and abundance of Snow that Day. At *Berlin* it ſeems to have been a dark and cloudy Month, with irkſome Cold towards the latter end.

In *November* *Auroræ Boreales* were at *Lunden* on the 2d, 7th, and 8th; at *Betna* the 2d. At *Lunden*, and *Upſale*, it was Cloudy, Foggy, Froſt and Snow: At *Bygdea*, *Pithea* and *Berlin*, fairer, with

with Froſt and ſevere Cold. At *Betna* the Cold was very intenſe; the Heavens very cloudy and miſty.

In *December*, at *Lunden Auroræ Boreales* were on the 5th, 6th, 7th, 8th, 9th, 10th, 14th, 15th, 16th, and 22d Days; and at *Upſale* on the 5th and 6th; and at *Berlin*, on the 7th and 12th there were Signals of the *Auroræ Boreales*. Froſt, and Snow, Cloudy and Fogs were at *Lunden*; at *Upſale* ſome Cloudy and Foggy, and a pretty deal of Fair ſometimes: At *Berlin* much Froſt, Cold, and a great Storm of Wind on the 23d: At *Pithea* frequent Snow, and ſome Fair, ſome Cloudy. *Betna* is noted to have moderately Snow, but twice more intenſe Cold, to the great Benefit of the Ways and Travelling.

For the better underſtanding the foregoing Obſervations, and for a Concluſion of them, it is to be obſerved, that the *Lunden Barometrical* Obſervations were made with a *Barometer* graduated according to our *Engliſh* Meaſure, into Inches, and I ſuppoſe Decimals of Inches. But the Thermometer (as I ſaid) I underſtand not.

The *Betna* Barometer alſo is graduated, according to *Engliſh* Meaſure, into Inches and Centeſms.

The *Upſale* Barometer and Thermometer, were both made by Mr. *Haukesbee*, and conſequently are according to *Engliſh* Meaſure; the Barometer having Inches and Centeſimal Parts; the Thermometer as I have before deſcribed.

The *Bygdea* Obſervations the Reverend Author did not live all the Year to finiſh, and there being none Barometrical, or Thermometrical, only a verbal Account of the Weather, and now and then of the Winds; therefore I have only, as Occaſion ſerved, taken notice of thoſe Remarks.

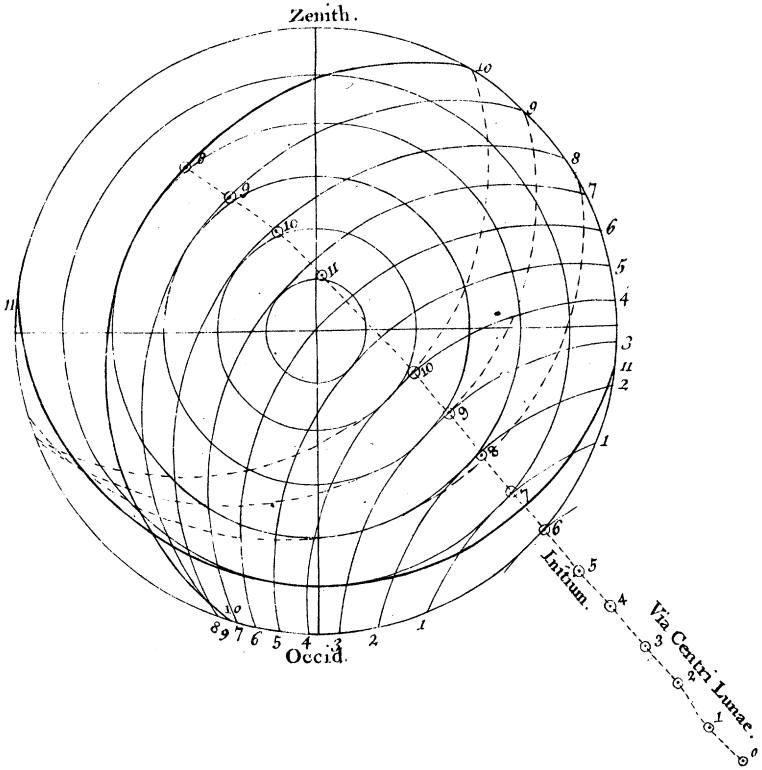
The

The *Pithea* Obſervations had none Thermometrical; and thoſe of the Barometer ſeem to be in Inches and centeſimal Parts.

V. De AMBRA GRYSEA. *Auctore* Caſparo Neumanno, M. D. *Chemiæ Profeſſ. Berolin. & R. S. S.*

PARS I.

DUO in Re Medica jure meritoque perquam mirari mihi ſæpè ſubiit 1.) quod certæ ſpecies, quæ ut ſubjecta pharmaceutica per longum tempus, imo quædam per aliquot ſecula in uſum vocatæ fuerunt, ita ut de aliquibus etiam in ſola Europa, non duæ vel decem libræ, ſed Centenarii aliquot quotannis conſumantur, ratione hiſtoriæ naturalis, loci natalis, originis, ubi & quomodo generentur, atque ex quo ortum ſuum trahant, præcipuè de variis uſualibus Vegetabilibus exoticis, e. gr. de Myrrha, quæ ab aliquot Millenariis jam adhiberi conſueverit, ut & de ſic dicto Gummi Animæ, Carannæ, Sanguine Draconis, Semine Cinæ, ac permultis aliis ſpeciebus, quales etiam variæ in reliquis Regnis occurrunt, ad hunc uſque diem non ſatis certò, genuinè, demonſtrative, & indubitatò cognitæ ſint; ſed de quibuſdam nihil niſi diſputabilia, dubioſa, variata, ſibi invicem contradicentia, plerumque tantum ex auditu oborta, quædam ab aliis ficta, & ex cerebello proprio ſibi comparata, indeque ut plurimum apertè falſa, ac de quibuſdam planè


Zenith.
Occid.
Initium.
Via Centri Lunae.