# PHILOSOPHICAL TRANSACTIONS. 

 October 20. 1683.
## The C O N T E N TS.

1. Hiftorical Obfervations relating to Conftantinople by the Reverend and learned Thomas Smith D. D. Fellon of Magdalen Colledge Oxon : and of the Royal Society.
2. An abjtralt of a Letter from Mr. Anthony Leeuwenhoeck of Delft, about Generation by an Animalcule of the male Seed. Animals in the Seed of a Frog. Some other obfervables in the parts of a Frog. Ligeftion © the motion of the bloodin a Feavor. 3. Relazione del Ritrivamento dell' vova delle Chocciole di $A$. F. M. in una littera al Sign. Marcello Malpighi in Bologna 1683.

Hiftorical Obfervations relating to Conftantinople. By the Reverend and Learned Tho. Smith D. D. Fellore of Magd. Coll. Oxon, and of the Royal Society.

COnftantinople, formerly Byzantium, was ${ }^{2}$ by Conftantine the great called fo after his own name, who being mightily pleafed with the beautiful and advantagious fituation of the place between two Seas, and defended by narrow ftreights on both fides, removed the Seat of the Empire hither, and laid the foundation of its future fplendor and greatnefs. It was alfo by a ${ }^{\text {b }}$ fpecial Edict or law of the fame Emperour, which he caufed to be engraven on a marble pillar, placed near his own ftatue on horfe-back, in one of the Piazza's of his new built City called Strategium, where the Souldiers ufed to Mu-

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iter, as in the Campus Martius, called fecond or nem Rome, in emulation of old Rome, which he defigned and endeavored this fhould equal in all things. Accordingly he endowed it with the fame priviledges and immunities, and eftablifhed the fame number of Magiftrates, and orders of people, and divided the whole extent of it into fourteen Precincts or ${ }^{c}$ Regions, according to the divifion of Rome. And the Greek writers were as elegant and extravagant in their commendations of it; but the ufual title in their ordinary difcourfes and writings, when they had occafion to mention it without any Hourifh, was i Baonevivery or $\hat{i}$ sudrais, that is, the Imperial City, to the fame fenfe with that of ${ }^{d}$ Sidonius Apollinaris,

## Salve fceptrorum columen, Regina orientis, Orbis Romatui.

The country about it was afterwards called Romania in a limited and reftrained fenfe, (for that Romania was anciently the fame with orbis Romanus, feems clear from ${ }^{\text {e Epiphanius ) and }}$ the people Popaño. But I fuppofe this was not done till about the inddle times of the Empire, when it began to decline. The Greeks ftill retain this name. For if you ask any of the Grecis born upon the continent of Thrace, what country man he is", he anfwers forthwith, Poomiñor Romios, for fo they pronounce it. The Turks in like manner call a Greek Chriftian Vrum Sisour, or the Roman infidel, as they will call fomtimes the En:perour of Germany, Urumler Padijba or Emperour of the Romans. Hence it was, that the latter Gracian Emperours ftyled themfelves basticis Poumian Kings of the Romans, that is, fuch as were born in Romania, and the other countries, which made up the Eaftern divifion of the Empire Tho perchance by this flourifhing title they pretended a right to the Govern-

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ment of the Weft: upon which vain prefumtion they affumed alfo the title of колииоият торяs or Emperours of the World, as if they had been the truc Succeffors of Auguftus, and the Weftern Emperors, Ulurpers, whom they called by way of contempt and indignation, Pines, Reges, as ${ }^{f}$ Luitprandus informs us in the accompt of his Ambaffy to Nicephorus Phocas, and afforded the people of Italy no other title than that of g Longobards or Lombards. The prefent Greeks call all the Weftern Chriftians sañvot or $\varphi a^{\prime} F_{\text {rot }}$ Latins or Franks, the Turks only making ufe of the latter, when they fpeak civilly of us, and calling Chriftendome Phrenkiftan, in the prefent Greek piaraia. The Turks now as proudly call Conftantinople Alem pena, or the refuge of the World: where indeed feems to be a medly of all or moft nations of three parts of it, and of all religions, which are allowed to be publickly profeft and exercifed every where throughout the Empire, except the Perfian. For they loo' upon it as a corruption of, and deviation from the rules and doctrine of Mahomet, their great falfe prophet, and therefore abfolutely forbid it, as repugnant to, and deftructive of the doctrine of life and falvation, as they fpeak. And accordingly they condemn with all imaginable fury the Profeffors of it, who pretend to follow Ali , as Sectaries and Apoftates, and entertain worfe opinions of them, then of Chriftians or fems or Infidels. The Perfians are not behind hand with them in their hatred and difrefpect, deriding them as grofs and Itupid, and looking upon them as little lefs then barbarous; intereft and zeal for their feveral tenents heightning their differences fo much, that in time of War they deftroy one anothers Mofibs. I remember, that there was a great difcourfe in Conftantinople among the Turks concerning an impudent hot-headed Perfian, who publickly in the new Mo/ch built by the Mother of the prefent Emperour, afferted that Ali was equal to Mahomet. But it feems he very luckily made his efcape out of their hands, at which the Priefts and the more zealous Turks were very much fcandalized.

The Greeks have twenty fix Churches within the walls of the

City, befides fix in Galata of which I have given an accompt elle where. They have alfo two Churches at Scutari, one at Kadikui or Chalcedon. So at Staurofis, Chingilkui, and feveral other Villages upon the Afian flore of the Bolphorus, as at Be/bicta/b, Ortakui, Chorouch cbefme, which Church is dedicated to St. Micbael the Archangel, Fenikui or Neochorion, Therapia, Bujukdere, and other Villages on the European fide. They have alfo a Church at Haskui, where is their Burying place, and another near the Bagno, dedicated to St. Parajceve. And at Tatoula about a mile from Pera, upon a Hill, which from the name of the Church is thence called by the Greeks and Franks, St. Demetrius his Hill. Next to the holy Virgin, St. Demetruus and St. George have moft Churches dedicated to them.

The Armenians have not, if I remember aright, above feaven Churches; they being few in number in comparifon of the Greeks.

The ferms may have in the City and places adjacent between twenty and thirty Synagogues, this being the greatelt fhelter of that accurfed and contemptible people in the Grand Signors dominions, next to Caire and Saloniki: and I believe there may be about twenty or thirty thoufand families of them. They are of great ufe \& fervice to the Turks, upon accompt of their brocage and marchandife, and induftry in feveral mechanical trades. All thefe I look upon as Natives, or Slaves rather, each paying mony for his head every year. The fers indeed very wifely collect this tax among themfelves and according to an agreement made with the Tefterdar or Treafurer, pay a certain fum in grofs for their whole nation refiding there: by which piece of cunning they are great gainers, and fpare the poor among them lefs able to pay, by a contribution of the rich to make up the fum. The Engli/b and Dutch Ambaffadors have their Chappels in their Palaces common to their refpective Nations.

The Churches and Chappels of the Weftern Cbriflians of the Roman Communion in Galata, are

St. Peters, belonging to the Lominicans, where is the famous piece of Madonna di Conflantinopoli as the Italians call it,

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or of the bleffed Virgin, holding the holy child fefus in her armes: which they pretend to be drawn by the hand of St. Luke, celebrated by fome of the latter Ecclefiaftical writers to have been a famous painter. Out of refpect to this idle tradition the credulous and fuperftitious Latines and Grecks of the Roman Communion fhew great veneration to it, which otherwife hath little in it of proportion, art, or beauty to derive any reputation upon the defigner, or upon his work.

St. Francis, belonging to the Conventuali, Fryars of the order of St. Francis: the ground of this by the wife conduret and interceffion of Cavalicre Molino, the Venetian Bailo, after the furrendry of Candia upon the peace made by the Republick with the Grand Signor, was procured to be refored, and a handfome Church rebuilt with the large contributions of mony fent out of Chriftendome.

St. Benedict, belonging to the fefiuts, where is a rich Altar curioully adorn'd with feveral figures in Mofaick. This Convent was purchafed for them by their great Benefactor, Henry the fourth of France.

St. Mary, belonging to the Ob/ervantines or Zoccolanti, a branch of the order of St. Francis, fo called from their going in Zoccoli or wooden clogs.

The Capucines have a little Chappel dedicated to St. George, hard by the Frencl) Ambaffadors Palace.

St. Ann, a Chappel frequented by the Perots.
St. Paul and St. Anthony, were both taken away fome years fince from the Chriftians, and turned into Mofihs. The former of which is now known by the nameof Arab Giame/i, or the Mofch of the Arabians. Our Interpreters mentioned alfo to me the Church of St . Golnn, which the Turks have feized upon for their ufe, St. Gcorge, which the fems are poffeft of, and St. Sebaftian, which was ufed to be vifited cheifly on Holy days.

The North wind blows for the moft part at Conftantinople. which mult be afcribed to its nearnefs to the Euxine fea, which bears that point from it. So that for want of a Southwardly wind fhips have been forced to lye a month or two fomtimes near the mouth of the Hellefpont. This was taken notice of long fince Y y 3

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by Eunapius in the life of Edefius, who afcribes the feldome blowing of the South, wind to the fituation of the mountains, whereas it is checked and overpowered by the exuberance of the vapours continually fent forth from the black and great Sea, as the Greeks call it in comparifon of the Mcditerranean. Vide ad finem Codini de origen. Conflantinopol. Edit. Parif. pag. 80.
'The Helle /pont is about forty miles in length, and at the $\mathrm{Ca}-$ ftles of $S e_{j}$ fos and $A b y d o s$ the ftreight may be about three quarters of an Enghifh mile over, or lefs.

The length of the Propontis is about a hundred and fifty miles, both fhores may be feen in the middle of it. In it are,

Cy;icus, an Illand near the Afian fhore, to which it is joined by two bridges. It ftill retainsits ancient name kuğsxo, and is the feat of a Bifhop, being inhabited by a confiderable number of Greeks.

Proconnefis, not far from the former; now, as for fome centuries paft, called Marmora, from the excellent quarries of Marble there found, the marmor Cyzenicum alfo being famous in the time of Pliny.

Besbycus, now called by the Greck waroonupo or the good haven, not far from the entrance into the bay of Montanea to the North and by Eaft. The Turks call it Imramle.

There are feveral Illands over againft thebay of Nicomedia, formerly called Sinus Aftacenus, according to Strabo, about fix or feven leagues from Conftantinople ${ }^{5}$.

Prote, fo called becaufe they approach firft to it, coming from Conftantinople; to the South of this Prencope and Pytis, which I take to be the fame with Pyrgos, that lyes inmoft toward the bay: Chalcitis, in modern Greek, Chalce or Chalcis. Oxia and Platy to the North-weft. I have expreffed the Turki/b names of the leffer and uninhabited Illands elfe where, which perchance were phantaftically impofed by fome Franks.

The Seraglio is at the extreme point of the North-eaft Angle of Conftantinople, where formerly ftood old Byzantium, within which towards the Haven is a ftately Kiosk or fummer houle, from whence the Grand Signor ufually takes Barge, when he paf-

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Yes into ASia, or diverts himfelf upon the Bosporus, at which time the Boftanyi babi, who hath the principal care of the Emperors palace, and hath the command of the Bosporus, fits at the helm and ftecres.

The leven Towers are at the South-eaft extremity.
The only Suburbs are to the North-weft, along the Haven fides; for above the hill, where the three walls begin, lies an open champaigne country, except that here and there at confiderable diftances farms houfes are fatter.

The Haven runs in from the Weft, and fo opens Eaft.
At the Eft end of Galata is Tophana where they raft their great Guns.

Pera and Galata have about fix gates to the Seaward. The whole tract of ground was anciently, before the times of the Emperor Valentinian, who enclofed and fortified Galata with walls and towers, ftyled nippiia or Regio Pera
 which is the reafon of its name, fated on higher hills, and whore afcent is more fteep and difficult.

Our modern Geographers, fuck as Mercator and Ortelius, who herein follow Ptolemy, place Constantinople in the Latitude of 43. degrees and 5. minutes: the Arabian and Perfian Aftronomers, as Abulfeda, Nafir Eddin, Vlugh Beigh, and fo the appozepoo vegivors of Cbryfococcas tranflated out of the Perfian tables, place it more Northerly in 45. But by latter and better obfervation it is found, that they have erred in affigning the Latitude of this City, as of feveral other places. To falve there differences, there is no jut ground of pretenfe to fay, that the Poles are moveable and have changed their fituation fince their time, whereas it may better be imputed to their want of due care, or to their taking things upon truft, from the reports of Trvellers and Seamen, not having been upon the places themfelves: which certainly is to be fail for Ptolemy whole offervations, as to places more remote from Alexandria, are far from being accurate and true. The learned Mr. Foin Greaves, as I find in a manufcript difcourfe, very worthy of being printed, which he prefented to the mont Reverend and renowned
nowned Arch-bijbop $\mathrm{v} / \mathrm{ber}$, took the height of the Pole at Conftantinople with a brafs fextant of above 4. feet radius, and found it to be but 4 f . degrees. $6^{\prime}$. but by the oblervation we made in our Court-yard at Pera with a very good Quadrant we found it but 40. degrees and 58. minutes of North Latitude.

There is no place between the Propontis and the walls of the City, except jult at the Seraglio-point, which may be two hundred paces in length; where they have raifed on a platform a battery for great guns: but from the point to the end of the Haven Weft, the fpace to the gates is unequal in fome places about twenty paces broad, in others three or four times as many more.

The diftance between Conftantinople and Chalcedon upon the oppofite Bithynian fhore may be about three or four miles.

In the walls are engraven the names of feveral Emperours, who raigned toward the declenfon of the Gracian Empire, as Theophilus, Michael, Bafilius, Conftantinus Porphyrogenitus, by whofe care, and at whofe expenfe the feveral breaches caufed in them by the Sea or by earth-quakes were repaired.

Kumkapi or the fand gate lies toward the Propontis: this the Greeks call in their vulgar language кovorvíne, Contofcalium, or the little fcale or landing place. Here formerly was an Arfenal for Gallies and other fmall veffels; it being a convenient paffage over Sea. Over this Gate was anciently engraven a curious infcription ftill preferved in that excellent collection publifhed by ${ }^{\mathrm{h}}$ Gruterus.

Fedicula Kapi, or the Gate of the feven towers, fo called from its neernefs to that Acropolis, is that, I guefs, which the Greeks formerly called $x \operatorname{rin}^{n}$ or the Golden Gate, and by fome late Latine writers Chryfea, in Luıtprandus, Carea, by a miftake either of the tranfcriber or printer, for Aurea, for fo certainly it muft be mended. Over this Gate was this infcription,

## Hrec loca Theudofius decorat poft fata Tyranni, Aurea fecla gerit, qui portam conftruit auro.

cited by Sirmond in his notes upon ${ }^{\text {i }}$ Sidonius. This Gate is in

[^2]the twelfth Region, and was alfo called dopuact from its beautifut and curious ftructure.

The Gun gate formerly called Roman gate, not becaufe it leads towards the continent of Romania or Th ace, but from ${ }^{k}$ St. Romanus, where the laft Chriftiain Emperor was killed at the affault, which the Turks made to force their way into the City by it.

Near Adrianople gate is a fair large Mofib called Ali-ba ffa, upon a hill accounted the higheft in the City.

The diftance between tower and tower in the upper wall to the landward may be about ninety of my paces; the face between that and the fecond wall about eighteen paces over.

The place, where the Lyons, Leopards, and fuch like wild creatures are kept, (where I faw alfo feveral farkals) was formerly, as the Greeks told me, a Chriftian Church dedicated to lizvaica or the Bleffed Virgin, where this verfe is ftill legible,

There is no tide or running back of the water on any fide of the Bo/porus into the black Sea, as ${ }^{1}$ fome have imagined, whofe miftake might poffibly arife hence, that the wind being at North, and blowing hard, the current fets more violently at fuch times againft the feveral headlands jetting out into the channel, which admits of feveral turnings, and fo the waters are forced back to fome little diftance: or elfe becaufe when the South-wind frefhens and grows boifterous, it makes a high rolling Sea in the Propontis and Bofporus, and being contrary to the current, gives a check to it, fo that it becomes lefs fenfible, and is eafily ftemmed. Where it is narroweft, the diftance feems to the eye to be fcarce a mile over from one fhore to another; where broadeft, not much above a mile and a halfe, unlefs where it runs into the deep bayes, which by reafon of their fhallownefs only harbour boats.

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The channel certainly is natural and not cut by art, as fome have idly fanfied, not confidering, how the Euxine Sea fhould difcharge it felf otherwife of thofe great quantities of waters, poured into it by the Ifer and Tanais, now called Don, and the other rivers, whereby it becomes lefs falt, even very fenfibly to the taft, than feveral parts of the Mediterranean.

The fifh by a ftrange kind of inftinct pafs in vaft fhoales twice a year, Autumn and fpring, through the Bofporus, that is, out of one Sea into another; of which the Greeks, who live feveral months of the year upon them, take great numbers, and fupply the markets at eafy rates; the Cormorants and other ravenous water-fowle, which the Turks will not fuffer to be deftroy'd or otherwife molefted, preying alfo upon them.

The weather in fome months is very inconftant, great heats and colds hapning the fame day upon the change of the wind.

The winters at Conftantinople are fomtimes extraordinary fevere. I have heard it related by feveral old Greeks, as a thing moft certain, that the Bofporus was frozen over in the time of Achmed, and that a Hare was courfed over it. It hapned thus, that upon a thaw huge cakes of Ice came floating down the Danube into the black Sea, and were driven by the current into the Bofporus, where upon the return of the froft, they were fixed fo hard that it became paffable. In the year 1669 there was ice in the Haven to the great amazement of the Turks; and lome were fo frighted at this unufual accident, that they look't upon it as a difmal prodigy, $\&$ concluded, that the world would be at an end that year. The Aguglia or Obelisk in the Hippodrame is betwixt fifty and fixty foot high.

The Hiftorical pillar in baffo rilievo, raifed in honour of the Emperors Arcadius and Honorius, may be in height about an hundred feven and forty feet.

Alexius Comnenus lies buryed in the Patriarchal Church againft the wall, and his daughter Anna Comnena, the Hiftorian, who lived about the year of Chrift ini7. They preted tofhew there the reliques of St. Anaftafia, who fuffered Martyrdome under the Emperor Valerianus, and of St. Euphemia, Virgin and Martyr, who loft her life moft glorioully for Cbrifts holy religion at Chalcedon under Liocletian.

In Sancta Sophia there are pillars fo great, that a man can fcarce fathom them at twice. At the end of the Gallery, that joy ns the other two, each about thirty of my paces wide, there is a piece of tranfparent Marble, two or three inches thick. In the North gallery upon the pavement is a reddifh fort of a marble ftone, brought, as the Turks and Chriftians relate, from Paleftine, on which they fable, that the Bleffed Virgin ufed to wafh the linnen of our Saviour.

I obferved but one ftep from the body of the Church to the Bema or place where the Altar formerly food.

The great Mofch at Chafim-baßa on Pera fide to the weft was formerly a Church dedicated to St. Theodofia.

Gianghir, a Mofch fo called upon a hill at Fondaclee neer Topbana.

In Conftantinople there are feveral narrow ftreets of trade, clofed up with fheds and pent-houfes, which I fuppofe were in ufe before the Greeks loft their Empire, and are the fame with the $\sigma x$ ктussi xai фpaxioi dobouo in Chryfaloras his ${ }^{m}$ Epiftle. But befides thefe places, feveral trades have their diftant quarters. The ftreets are raifed for the moft part on each fide for the greater convenience.

Not far from Suleimania is the houfe of the Aga or General of the fanizaries, which fo often changes its mafters.

Pompeys pillar, as the Franks erroneoully call it, is of the Corinthian order, curioufly wrought, about eighteen foot in height and three in diameter.

Be/bikta/h, a village within three or four miles of Conftantinople towards the Bofporus, where lies buryed the famous pyrate Ariadin, whom the Chriftian writers call Barbaroffa, who built here a handfome Mofch, having two rows of pillars at the entrance. The Captain Baffa ufually, before he puts to fea with his Armata of Gallies, vifits the Tomb of this fortunate robber, who had made feveral thoufand Chrifians 1laves, and makes his prayers at the neighbouring Church for the good fuccefs of his expedition.

They reckon in the City above a hundred publick baths, every fret almoft affording one. They are efteemed works of great Piety and Charity, there being a continual fe of them, not only upon the accompt of religion, but of health and cleanlines. For their dye being for the molt part hot faced meats in the winter, and crude fruits in the fummer, their liquor fourtain water, or Coffee, to which we may add their lazy kind of life (for walking is never ufed by them for digeltion, or otherwife in the way of diverfion ) frequent bathing becomesneceffary.

There are feveral receptacles of water under ground, and one particularly under the Church of Santa Sophia, as I was informed; but I did not think it worth my curiofity to defend into it. There were of great ufe to the poor Greeks in the la ft fatal fiege ; but the Turks are fo fecure, that they do not think, that they deferve either coff or pains to keep the waters feet, or the cifterns in repaire.

The Aqueducts, which anfwer to those glorious Aquadufts, near Pyrgos, and convey the water to the great ciftern neer Sultan Selims Mofch, are in that part of Constantinople, which lies between the Mofch of Mahomet the Great and Sha fade.

The Turks began to befiege Constantinople on the fifth of April, and took it the twenty ninth of May on Whit fin Tuesday morning 4453. or as the Turks reckon in the year 857. of the Hegira, or flight of Mahomet, the 22 . day of the firft fomad.

The Chapped, where Ejub Sultan is interred, at whole head and feet I obferved great wax candles, is enclofed with latten wire grates, for the better accommodation of foch religious Tweaks, as come to pay their reflect to the memory of this great Mufulman Saint. In the middle of the Area there is railed a building fuftained by excellent marble pillars, afcended by two feveral pair of fairs, where the new Emperor is inaugurated, and where he ufually goes in Buran time.


[^0]:     vita Contantini lib. IV. cap. 36. \& apud Theoderitum Hiflor. Ecclef. lib. i. cap. 16. v. etiam Sucrat. Scholaf. Hint. Fcclef. lib. I cap. is.
    $b$ V. Socratem ibidem. Et Il:copbanem in Chronographia XXV. anno Conftanrini.

[^1]:    c The Ita ian word Rione is a manifeft corruption of the Lain word.
    d In Panegyrico, quem Roma dixit Anthemio Augu:o, b:s Confuli.
    e Hxrefi LXiX. qux eft Arianorum. Sect. 2. where he fays a fat difinal fire was kindled
     Mépn, which feized almof upon all Romania, or Univer'um Romanorum imperium, as Hetavius rendersit, but efpecially the Eaftern fasts of it.

[^2]:    क Pag. 169. Num. 3. $i$ Pag. 121,

[^3]:    k Vid. Hiftorian Politicam Conftantinopoleosapud Cruflum in Turso-Grxcia, pag. 9.
    $l$ This was an o!d error; for thus wrires Dionyhus Byzanrinus inhis little Bork of tie
    

