Girolamo Fracastoro and syphilis / [W.K. Stratman-Thomas].

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This may be of interest as I have not seen the portrait of Fracastoro in the National Gallery (p. 8) described in any previous paper on Fracastoro.

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FOUR hundred years ago (in August 1530), Girolamo Fracastoro, the genial Veronese physician, astronomer and poet, published that most interesting medical poem *Syphilis sive Morbus Gallicus*. Dedicated to his friend, the Cinquecento pagan, Cardinal Pietro Bembo, the poem surveys, in the flowery pseudoclassical style of the period, opinions on the origin, symptoms, and treatment of the disease now known by the name Fracastoro gave to one of his poetical characters.

Where Fracastoro got the word *syphilis* is not known. But that this name of the fictitious shepherd, who Fracastoro says first contracted the illness by defying the sun god, has become the common designation of the disease was not mere chance. The jolly Fracastoro deliberately gave the cue in the poem itself. As translated in 1686 by "England's worst poet laureate," Nahum Tate, the passage reads:

A Shepherd once (distrust not ancient Fame)
Possest these Downs, and *Syphilus* his Name.
. . . . . .
He first wore Buboes dreadfull to the sight,
First felt strange pains and sleepless past the Night;
From him the Malady receiv'd its name,
The neighboring Shepherds catcht the spreading Flame.

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*Edited for publication by Dr. S. V. Larkey and Professor C. D. Leake from notes and material prepared by Dr. Stratman-Thomas while in London and Africa as a Guggenheim Traveling Fellow, 1928-1930.

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Fig. 1—Wood-cut portrait of Fracastoro in his *Homocentrica,* Venice, 1538. Supposed to be the only genuine likeness made during his life (1478-1553).

Later, in the more critical discussion of the disease in his pioneer treatise on infections, *De contagionibus et contagiosis morbis* (1546), Fracastoro consistently refers to the condition by the name given to it in his earlier poem, *Syphilis.*

While Fracastoro is generally known because

of his famous poem, his scientific position is assured by this treatise on infections. Carefully analyzed by the Singers,[1] they state "the excellencies of this work are so numerous as to mark an epic in the history of medicine." As an astronomer, Fracastoro wrote in opposition to the Ptolemaic doctrine of a geocentric universe. In this he may have been inspired by his medical schoolmate at Padua, the famous Pole, Copernicus (1473-1543). The first to use the term "pole" with reference to the earth, he was also a pioneer in the scientific analysis of the refraction of light, and the Singers say he was "probably the first to suggest the combination of lenses as an aid to vision." Always busy at intellectual tasks, he shunned the political and religious intrigues of his age, and lived quietly in his country villa, beloved by his friends and respected by his countrymen. He died in 1553 from apoplexy, and was buried in his beloved Verona.

In 1555 the Senate of Verona commissioned Danese Cataneo to carve a lifesize statue of Fracastoro,[2] which now adorns a narrow street arch near the Piazza dei Signori. Klebs has entertainingly described [2] another bust, presumably of Fracastoro, by this same Cataneo. Most of the representations of Fracastoro seem to have been taken from the woodcut portrait in his *De Homocentricis* (Verona, 1538), which is supposed to be the only authentic likeness made during Fracastoro's life. There is, however, a portrait (No. 3949) in the National Gallery, London, which is supposed to be that of Fracastoro, and which is attributed to Francesco Torbido (1486-1545). While it portrays a slightly younger man than the woodcut, there is considerable similarity. The mole near the nose on the right side of the face,

which shows on the woodcut, is lacking in the painting. But in the Pitti Gallery (Florence) portrait,[3] this mole appears on the left side of the face. Since the National Gallery portrait has not hitherto been published, enough interest attaches to it to reproduce it here, with the woodcut, for comparison.

THE POEM

After the usual flowery introduction, Fracastoro alludes to the belief that syphilis was brought to Europe from the New World. He says, as translated by Tate (1686):

> "Say, Goddess, to what Cause we shall at last
> Assign this Plague, unknown to Ages Past;
> If from the Western Climes 'twas wafted o'er,
> When daring Spaniards left their native shore;
> Resolv'd beyond th' Atlantick to descry,
> Conjectur'd Worlds, or in the search to dye.
> For Fame Reports this Grief perpetual there,
> From Skies infected and polluted Air:
> From whence 'tis grown so Epidemical,
> Whole Cities Victims to its Fury fall;
> Few 'scape, for what relief where vital Breath,
> The Gate of Life, is made the Road of Death?"

It may be that the "Grief perpetual" referred to in the New World was yaws, difficult to distinguish from syphilis, and endemic in the West Indies. Columbus' sailors may easily have contracted this disease and returned with it to Europe.

But Fracastoro with much wisdom does not directly accept the vulgar notion that syphilis was a newly arrived disease for these cogent reasons: Syphilis appeared in some European countries having no traffic with America; the disease became epidemic in many distant nations at the same time; syphilis was present first in France, then in Italy before it was known in Spain. There-

fore, for the origin of syphilis one must look elsewhere than to America.

Further, in this pioneer but poetical discussion of the origin of syphilis, Fracastoro states that diseases are of two kinds: certain distempers are constantly present (endemic) and consequently are always recognized; others may appear only at long intervals (epidemic)—intervals so long that not only the clinical description of the disease, but its very name is forgotten. Syphilis is one of the latter group, and the Neapolitan pestilence is not the first epidemic of syphilis that has spread over Europe—nor the last!

It is the opinion of Fracastoro that the pollution of the atmosphere is the cause of syphilis. The virus can enter man easily since the air not only enters the body by every pore, but is also inhaled. The causes of this atmospheric pollution, he opines, are certain untoward conjunctions of the planets, the common explanation of the time for all major natural phenomena—and reasonable enough, Fracastoro, suggests, for do not the seasons depend on the position of the sun, and the tides on that of the moon?

The aid of Apollo is now invoked in describing the symptoms of the disease, so that when it appears again it may be recognized and not considered new.

"Yet oft the Moon four monthly rounds shall steer
Before convincing Symptoms shall appear;
So long the Malady shall lurk within,
And grow confirm'd before the danger's seen;
Yet with unwonted heaviness is seiz'd,
With drooping Spirits, his affairs persues,
And all his Limbs their offices refuse,

The chearful glories of his Eyes decay,
And from his Cheeks the Roses fade away,
A leaden hue o'er all his Face is spread,
And greater weights depress the drooping Head;
Till by degrees the secret parts shall show,
By open proofs the undermining Foe;
Who now his dreadful ensigns shall display,
Devour and harass in the sight of day.

. . . . . .

Dire Ulcers (can the Gods permit them) prey
On his fair Eye-balls, and devour their Day,
Whilst the neat pyramid below, falls mouldring away.

. . . . . .

Whence to the Bloudless Nerves dire Pains ensue,
At once contracted, and expanded too;
The thinner Parts will yet not stick so fast,
But to the surface of the Skin are cast,
Which in foul Botches o'er the Body spread,
Profane the Bosome, and deform the Head:
Here puscles in the form of Achorns swell'd
In form alone, for these with Stench are fill'd,
Whose Ripeness is Corruption, that in time,
Disdain confinement, and discharge the slime;
Yet of the Foe would turn his forces back,
The Brawn and inmost Muscles to attack,
And Pierce so deep, that the bare Bones have been
Betwixt the dreadful fleshy Breaches seen;
When on the vocal parts his Rage was spent,
Imperfect sounds for tuneful Speech was sent."

In advising on the treatment of syphilis Fracastoro reveals sound clinical judgment. He suggests that the physician first of all study the temperament of his patient in order to facilitate confidence and cure. To keep the patient from gloomy introspective thoughts, mild outdoor exercise in a good climate is urged. With clear appreciation of the venereal character of the disease, Fracastoro specifically cautions against spreading it through sexual indulgence:

"With lighter Labours of the Muses sport,
And seek the Plains where Swains and Nymphs resort.
Abstain however from the Act of Love
For nothing can so much destructive prove:
Bright Venus hates polluted Mysteries,
An ev'ry Nymph from foul Embraces flies.
Dire practice! Poison with Delight to bring,
And with the Lovers Dart, the Serpent's sting."

A careful dietary regimen is to be observed, says Fracastoro, and bleeding may be employed if the patient is robust. After these general instructions, the real cure is to be secured by the use of mercury. Fracastoro states that the therapeutic action of mercury may be explained in one of three ways: (1) Mercury may immediately attack the virus and destroy it; (2) mercury may be inert, and incapable of destroying the virus until the metal has been acted upon by the human body; or finally (3) it may act upon the human body itself in such a manner that man's very self destroys the virus:

"The greater Part, and with success more sure,
By Mercury perform the happy Cure;
A wondrous virtue in that mineral lies . . .
. . . . . .
And for a Vehicle use lard of Swine . . .
. . . . . .
This done, wrapt close and swath'd, repair to Bed,
And there let such thick Cov'rings be o'er-spred
Till streams of Sweat from ev'ry pore you force:
For twice five Days you must repeat this Course;
Severe indeed but you your Fate must bear,
And signs of coming Health will streight appear.
The Mass of Humours now dissolv'd within,
To purge themselves by Spittle will begin,
Till you with wonder at your feet shall see
A Tide of Filth, and bless this Remedy."

Before discussing in detail the therapy of syphilis with mercury, Fracastoro makes a long poetical digression explaining how the gods revealed to Ilceus the use of mercury for this condition. He also gives in long passages an account of the use of the "sacred wood," guaiac, in treat-

Fig. 2.—Portrait No. 3949, National Gallery, London, supposed to represent Fracastoro. Attributed to Francesco Torbido (1486-1545), his contemporary. Courtesy National Gallery.

HIERONYMI FRACASTORII SYPHILIS.

SIVE MORBVS GALLICVS AD P. BEMBVM.

Vi caſus rerum uary, quæ ſemina morbum
Inſuetum, nec longa ulli per ſecula uiſum
Attulerint: noſtra qui tempeſtate per omnem
Europam, partimq; Aſiæ, Libyęq; per urbes
Sæuyt: in Latium uero per triſtia bella
Gallorum irrupit: nomenq; à gente recepit.
Nec non & quæ cura: & opis quid comperit uſus,
Magnaq; in anguſtis hominum ſollertia rebus:
Et monſtrata Deum auxilia, & data munera cœli,
Hinc canere, & longe ſecretas quærere cauſas
Aera per liquidum, & uaſti per ſydera olympi
Incipiam. dulci quando nouitatis amore

Fig. 3—First page of text from Fracastoro's *Syphilis, sive morbus Gallicus,* First Edition, Verona, 1530. Courtesy Dr. LeRoy Crummer, whose beautiful large margin copy contains several pages of manuscript material in a contemporary hand apparently continuing the poem.

ing the disease as followed by the natives of America, where the wood grows, and as revealed by them to the Europeans.

The latter part of the poem is concerned with a lengthy mythical story of the shepherd of King Alcithous, Syphilis by name, who by defying Apollo in a bitter drought was punished by being the first to contract the disease.

It is easy to see how such an interesting poem, combining practical medical skill with great artistic ingenuity, should become deservedly popular. It went through very many editions, and has been translated into almost every important European language. Fracastoro's *De Contagionibus* (1546), a really great scientific contribution to medicine, deserves similar recognition, for in it is enunciated clearly the modern doctrine of the specific character of fevers, the differentiation as a clinical entity of typhus fever, and the basis of modern teaching on infection by the classification of the modes of infection. In addition to its excellent discussion of syphilis, this treatise also contains a still unappreciated, in spite of Osler's eulogy,[4] account of phthisis.

The splendid new and complete English translation,[5] with extensive notes and bibliographical and historical comments, of the *De Contagione* by Prof. W. C. Wright of Bryn Mawr, makes Fracastoro's most important contribution available to modern readers. This should result in general recognition of Fracastoro's significance in the slow transition from the ancient humoral conception of disease to the present specific notion of fevers. It is heartening to note an increasing interest on the part of modern classical scholars in the scientific aspects of classical and mediaeval writers. Prof. Wright's excellent ef-

fort is, let us hope, only the beginning of many similar studies in medical history.

Truly Fracastoro was a great and brilliant man: physician, poet, astronomer, physicist, and humanist. In his calm achievements, in spite of the restlessness of his age, we may, four hundred years later in a similar restless age, find much comfort and inspiration.

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