Shamelessness Shouldn't Be Anyone's Nature

—An Open Letter to *Nature* (Part XLVII)

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The Hanly War (VIII): The Genuine Quack

【Abstract】

On Feb. 10, 2012, Fang Zhouzi published an article entitled *A Dispute Caused by a Parasite* in *Xinhua Daily Telegraph*, trying to "scientifically" depict Han Han as a liar by citing "many physicians," and attempting to "historically" decorate himself as a science hero by telling the historical story of identifying the cause of scabies. It turns out that Fang's article was stolen from a paper published in 1998 by a Brazilian dermatologist, and along with stealing the story, Fang copied numerous historical factual mistakes, among which the biggest one is that the discovery made by Italian physician Bonomo and naturalist Cestoni in 1687 was forgotten for about 150 years before it was rediscovered in the 19th century. In this part of the *Open Letter to Nature*, evidences are present to set the historical record straight, and demonstrate Fang's shameless and malicious plagiarism.

【Contents】

As mentioned in the previous part of the *Open Letter to Nature*[1], Fang's attempt to deprive Han Han's authorship of his essay, *Seeing a Doctor*, failed miserably. On the contrary, and as the consequence, the fraudulent and evil tactics Fang had been using against his targets up to that time, as well as his own dirty plagiarist history, became known to more and more people. To salvage himself from the disaster, Fang plotted and implemented a series of actions, and one of them was an article he published in his weekly column in *Xinhua Daily Telegraph*, entitled *A Dispute Caused by a Parasite*. Here is its abstract:

> "Scabies is caused by scabies bug which parasitizes in human body, the scabies bug drills into the skin, making tunnels while walking inside, and laying eggs, which induces allergic reactions, resulting in skin rash and itching. Bonomo has been considered in the medical history the first person who ever identified the pathogen of a disease, and by that time, more than 150 years had passed since his great discovery."[2]

And here is his opening paragraph:

> "In recent days, because of the controversy about whether Han Han's articles were ghostwritten, an infectious skin disease became well-known on Weibo and forums on the internet. It is said that one of the essays Han Han submitted to the inaugural New Concept Writing Competition, *Seeing a Doctor*, was based on his personal experience with seeing a doctor for the treatment of the scabies he got in his school. However, after reading the essay, many physicians unanimously believe that the symptom described in the essay is not scabies. Scabies is caused by scabies bug which parasitizes in human body, the scabies bug drills into the skin, making tunnels while walking inside, and laying eggs, which induces allergic reactions, resulting in skin rash and itching. The itching caused by scabies is limited to special areas such as hands, wrists, abdomen, genitals, and there will be skin damages in the itching areas, including rashes, small blisters, or scabs. Therefore, it is very easy to pinpoint where the itching is located, rather than like what was described in the essay that the patient was unable to tell his doctor where the itching was, and once the itching started, it occurred everywhere. The skin itch described in *Seeing a Doctor* is caused by other factors, such as hepatitis." (See the appended table at the end of the article for the original Chinese. Hereinafter the same.)

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方舟子:一种寄生虫引起的争端

2012年02月10日 07:31:48 来源: 新华每日电讯13版 【字号 大小】【留言】【打印】【关闭】

疥疮是由于疥虫寄生在人体引起的,疥虫钻入皮肤,在皮肤中间穿行打隧道、产卵,引起过敏反应,导致皮疹、瘙痒。博诺莫被认为是人类医学史上首次确定一种疾病的正确病因的第一人,此时距离他的伟大发现已经过了150多年。

近日由于对署名韩寒的作品是否别人代笔的争议,一种有传染性的皮肤病传遍了微博和网上论坛。韩寒在1999年提交首届新概念作文大赛的文章之一《求医》据称是根据他当时在学校被传染上疥疮,到医院看病的经历写成,但是许多医生看了这篇文章之后,一致认为根据文中对疾病症状的描述,写的不是疥疮。疥疮是由于疥虫寄生在人体引起的,疥虫钻入皮肤,在皮肤中间穿行打隧道、产卵,引起过敏反应,导致皮疹、瘙痒。疥疮的瘙痒局限于手、腕、腹部、阴部等特定部位,痒处会有皮损,包括皮疹、小水疱或结痂。所以要指出哪里痒,是很容易的,而不是像文中所述无法向医生指出痒在何处,而一痒起来又是全身无处不痒。《求医》描述的是其他因素(例如肝炎)引起的皮肤瘙痒。

The mouthpiece of the mouthpiece

The screenshot of the top portion of Fang's malicious and fraudulent article, *A Dispute Caused by a Parasite*, on xinhuanet.com, the official website of the Xinhua News Agency.

Of course Fang was lying: till this day, more than three years later, Fang is still unable to reveal the identity of a single one of his "many physicians." On the contrary, it has been demonstrated[1] that some of his so called "physicians" are genuine quacks; and Fang's assertions that "the itching caused by scabies is limited to special areas," and "it is very easy to pinpoint where the itching is located," were based purely on his ignorance and evilness.

Admittedly, the abstract and the first paragraph were the only places where Fang mentioned Han Han and talked about his "dispute" with Han Han. Fang used the rest part of the article to tell the history of identifying the cause of scabies, trying to illustrate his final point:

> "It is very difficult to change people's traditional thinking. Even such a simple scientific discovery needed such a long time to be recognized, let alone the more complicated controversies."

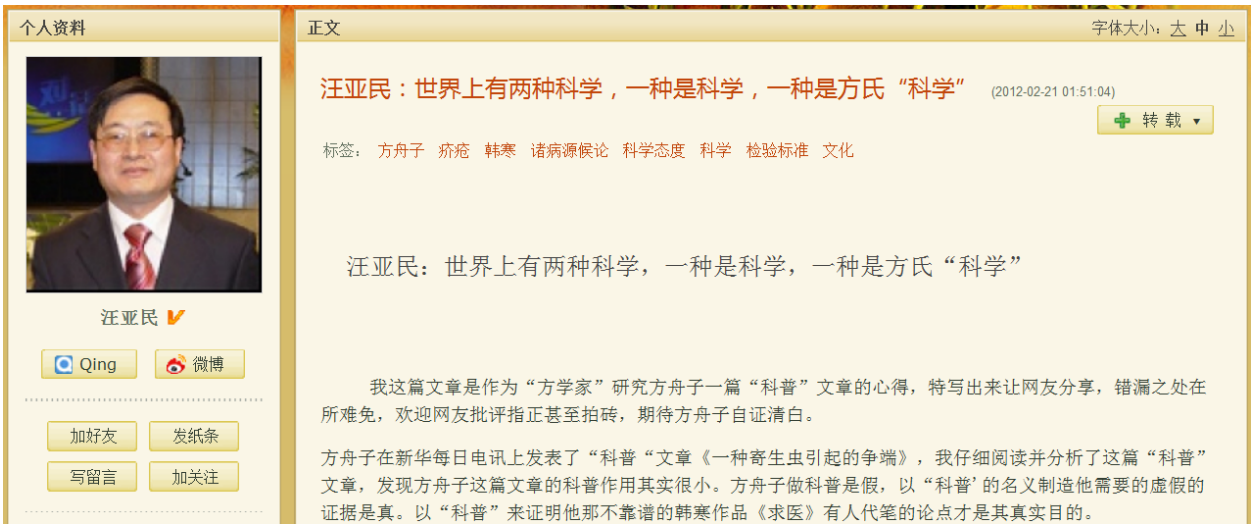
Fang's true intention for writing the article was exposed by a blogger, Mr. Wang Yamin (汪亚民), one week after Fang posted the article on his Weibo. Mr. Wang's article is entitled *There Are Two*

Kinds of Sciences: One is Science, the other is Fang's Science, and here are the key paragraphs in the article:

> "Fang Zhouzi has published a 'science popularization' article in *Xinhua Daily Telegraph*, *A Dispute Caused by a Parasite*. I have read and analyzed the 'science popularization' article carefully, and found that the article actually has little to do with science popularization. Doing science popularization is Fang's disguise; what he really does is to fabricate evidence in the name of 'science popularization.' His real purpose [for writing the article] is to demonstrate his unreliable and unconvincing argument that Han Han's *Seeing a Doctor* was ghostwritten."[3]

> "On the surface, Fang's so called 'science popularization' article, which contains about 1,800 characters, introduces the disease of scabies and the history of the discovery of its causing agent; however, it is not difficult for a careful reader to discover that the article has two focal points: the first one is to demonstrate, via the so called 'science popularization,' that the systemic itching symptom Han Han described in *Seeing a Doctor* was not caused by scabies, but by hepatitis."[4]

> "The second focal point is to attempt to demonstrate, by digging into the history of science and technology and by using the historical facts that it is very difficult to change people's stereotype, that it will take a long time for people to accept his questioning of Han Han. In other words, Fang is trying to build a refuge of 'science' for his failed attempt to topple Han Han; and his first step is to dress himself up as the representative of science and the incarnation of Mr. Always Right."[5]



Alternative Science

Many Chinese people have already realized that the "science" Fang Zhouzi has been "standing up for" is not the science as defined by dictionaries and acknowledged by the scientific community in the world; rather, it is a malpractice called "Fang's science." The above image is the screenshot of the title portion of Mr. Wang Yamin's blog article on sina.com: *There Are Two Kinds of Sciences: One is Science, the other is Fang's Science*.

The fact is, most, if not all, of Fang's scifool articles have been written for the two purposes and the two purposes only: promote his hidden agenda, and attack his personal enemies. Also, as having been demonstrated repeatedly before, the majority of Fang's scifool articles are plagiarism. And this article of Fang's is no exception at all: besides using a public platform to advance his private and malicious desire to assassinate Han Han's character, and besides doing evil in the name of science popularization, Fang wrote the entire article, barring the first and last paragraphs, by stealing.

Unfortunately, what Fang stole seems to be a secondhand also, therefore Fang's article is full of factual yet stupid mistakes.

So, what kind of mistakes Fang made in his article? How did he make these mistakes? Who was Fang's victim? In this part of the *Open Letter to Nature*, these questions will be answered.

Arousal of Suspicion

Many of Fang's plagiarism cases were discovered from noticing the obvious mistakes he made in his articles. A perfect example is the so called "Longevity Case" in which Fang plagiarized Dr. Robert Arking of the Wayne State University to write his *Eat Less, Live Longer* in 2002, and then republished it for at least 5 more times in 10 years. The discovery of case actually started from the ten mistakes Fang made in the first paragraph, which contains only 250 Chinese characters, in his newest version of the article, and after being accused of plagiarism, Fang made a counter accusation against a professor at Peking University, claiming that he was actually a victim instead of a thief, and at the same time, Fang revealed his self-plagiarism. Based on these clues, I finally identified the sources of Fang's stealing[6]. Similarly, the suspicion that Fang might have committed plagiarism in his *A Dispute Caused by a Parasite* was aroused also by the stupid mistakes he made.

1. Fang's Medical Knowledge

Here is the third paragraph of Fang's article:

> "The scabies bug is very small, its body length is less than 1 millimeter, hardly visible with naked eyes, but some careful ancient physicians were still able to see the tiny bug in the blisters of the scabies patients. However, these physicians didn't conjecture naturally that the tiny bug is the causing agent of the disease; rather, they thought the bug was generated from the corrupted flesh caused by the scabies."

First of all, it seemed that Fang didn't know the fact that the parasite which causes scabies is a mite, a small arthropod belonging to the class *Arachnida*, which differs from class *Insecta*, so in the article Fang used the term "疥虫" (jiè chóng, "scabies bug" or "scabies insect") 16 times, but he didn't used the term "螨" (mǎn, mite) even once.

Terminology

In Chinese, 虫 (chóng) is both a generic term for bugs or worms, and a specific term for insects; 螨 (mǎn) is the specific term for mites. The above images show the two characters in the small seal script. Please note that the character 螨 uses character 虫 as its radical.

Secondly, it seemed that Fang had absolutely no idea about the size of the itch mite, because any scientific or medical literature will tell you that the size of scabies mite is much less than 1 millimeter. For example, a book published in 1910 says:

> "The female mite is the one which invades the integument, the male never being found in the cutaneous tissue, ……It is observed that the male is much smaller than the female; the latter is about 1/70 of an inch long, and1/3 less in width."[7]

The above statement is virtually reaffirmed a century later:

> "The adult female is approximately 0.3 to 0.5 mm long by 0.3 mm wide, and the male is slightly smaller, around 0.25 mm long by 0.2 mm wide."[8]

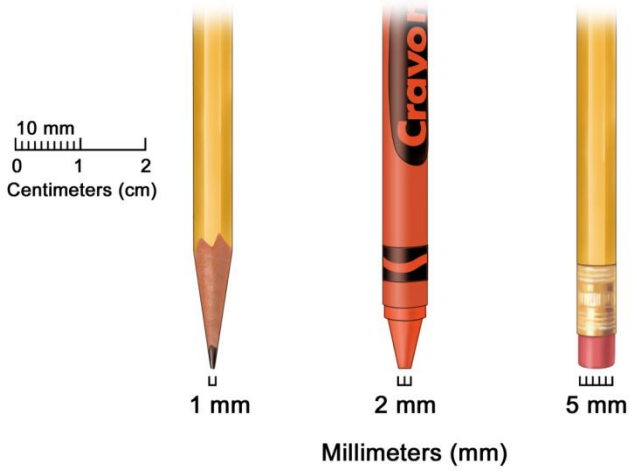
> "The mature female mite is approximately 400 μm in length and approximately 325 μm in width, while the mature male mite is approximately 60% of the female size."[9]

> "Females are 0.30 to 0.45 mm long and 0.25 to 0.35 mm wide, and males are slightly more than half that size."[10]

Therefore, by saying that the itch mite is "less than 1 millimeter," Fang actually magnified the size of the mite by 2-3 folds. The funny thing is, in a few months, Fang would launch a new campaign questioning Han Han's height, arguing that Han Han is actually a few centimeters shorter than what he had claimed, which, according to Fang, suggests that Han Han is a habitual liar (more on this in the next part of the *Open Letter*).

Thirdly, by saying that a matter less than 1 millimeter long is hardly visible with naked eyes, Fang revealed that he had no idea about the visibility of naked eyes. Here is a passage from Wikipedia:

> "At a viewing distance of 16" = ~ 400 mm, which is considered a normal reading distance in the USA, the smallest object resolution will be ~ 0.116 mm. For inspection purposes laboratories use a viewing distance of 200–250 mm, which gives the smallest size of the object recognizable to the naked eye of ~0.058- 0.072 mm(~55-75 micrometer)."[11]



Habitual and selective blindness

Fang Zhouzi, the self-claimed most popular science popularization writer in China, believes that a subject less than 1 millimeter long is hardly visible with naked eyes. The diagram shows the sizes of millimeters.

(Source of the image: http://www.cancer.gov/dictionary.)

Fourthly, by saying "some careful ancient physicians were still able to see the tiny bug in the blisters of the scabies patients," Fang revealed that he didn't know the fact that the "scabies bug" does not exist in the blisters which are actually the result of the allergic reaction caused by the infestation of the mite. As a matter of fact, the very cause of the "dispute" about the etiological discovery of the scabies is this misperception. So you know how ironic it is for Fang to write the article to popularize this piece of medical history.

Scabies: the cause and effect

Upper left: the scanning electron micrograph of a scabies mite; Upper right: the allergic blisters caused by itch mite infestation, the blisters contain no scabies mites; Lower: the scabies burrow in which the female mite lives. (Source of the images: WebMD. *Scabies Slideshow: Symptoms, Cause, and Treatments*; *Scabies Pictures Slideshow: Stop the Itch Mite*.)

Finally, by blaming those "careful ancient physicians" who were able to see the tiny bug in the scabies patients but were unable to "conjecture naturally that the tiny bug is the causing agent of the disease," Fang, a self-identified "biomedical expert," revealed that he was completely unaware of Koch's postulates, which stipulates how to identify the causing agent of a disease. Simply speaking, according to the postulates, one has to isolate the agent from the patient, and inoculate the agent on to healthy people to re-produce the same disease to establish a causative relationship. In other words, a simple physical association of a bug with a disease is far from enough to "conjecture naturally" their etiological relationship.

2. Fang's Medical History

In 2000, Fang Zhouzi told Dr. Liu Huajie of Peking University that he had been always interested in the history and philosophy of science; and what he wanted to do the most was to "reflect on the history, method, and thought of biology."[12] One year later, Fang told his future wife Liu Juhua the following:

> "Academically, I am more interested in exploring the issues in the philosophy and the history of science."[13]

Fang's first mission of exploration in the philosophy of science was accomplished by stealing Dr. Robert Root-Bernstein's paper to write his *What is Science* in 1995[14]. Similarly, Fang's numerous explorations in the history of science were made by directly translating other people's English articles and then hiding his sources[15]. Apparently, *A Dispute Caused by a Parasite* was Fang's another "exploration" in the history of science - Yes, Fang does believe that medicine is a science.

According to Fang, the story about the discovery of scabies' cause is like the following:

① Before Italian physician Giovan Cosimo Bonomo, people believed in the spontaneous generation theory and the humoral original of scabies;

② It was Bonomo who first discovered that scabies is caused by the itch bug;

③ Because of being subdued by the religious force, Bonomo's discovery was completely forgotten for more than 150 years;

④ It wasn't until 1844 when Bonomo's discovery was rediscovered by Austrian physician Ferdinand Hebra.

The fact is, what Fang said above is nothing but nonsense.

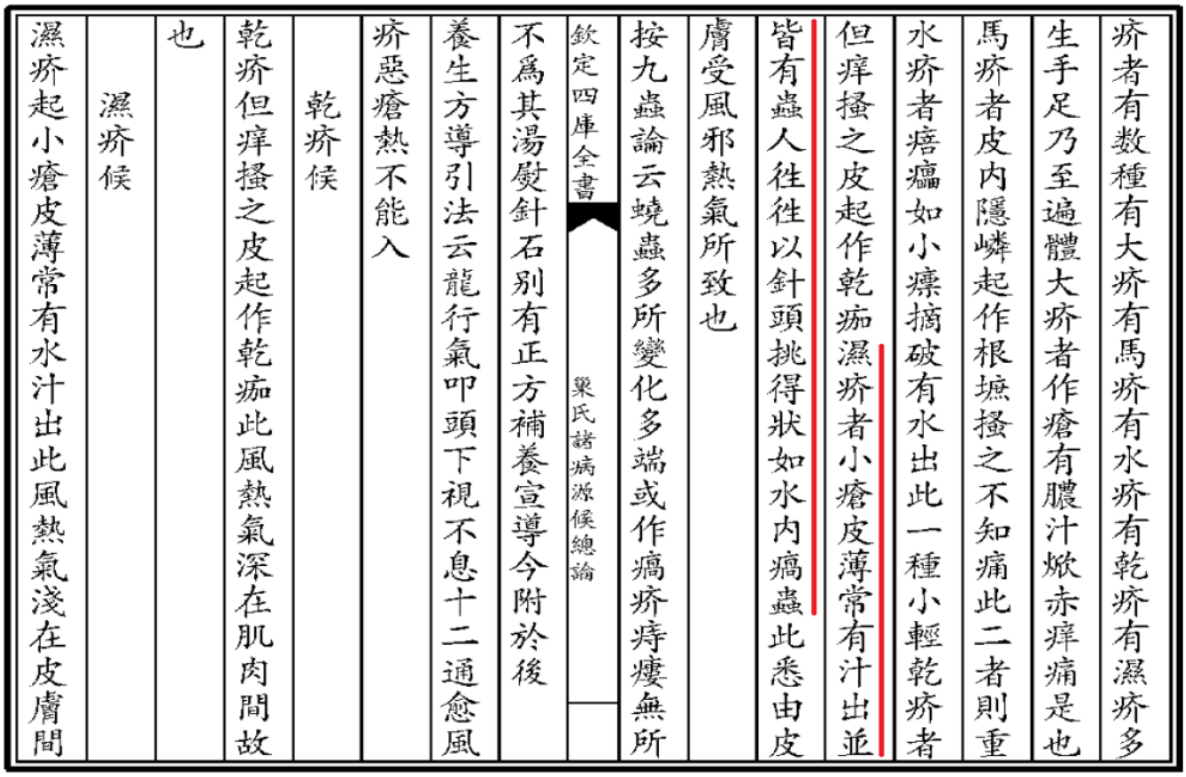
(1) The Pre-Bonomo Era

As having been documented extensively, before Bonomo's discovery, many people, including Chinese and Arabians, as well as Europeans, had discovered the association of a small bug with scabies. For example, a Chinese medical book written in 610 AD has the following passage:

> "The wet scabies causes small sores with thin cuticle, from which fluids often come out. The small sores all have worms. People usually use a needle point to extract the worms, which look like pathogenic worms in water."[16]

The above record was introduced to the English world no later than 1956:

> "With regard to *Sarcoptes scabiei* there are a number of statements in Chinese medical literature about minute 'worms' in the skin which can be removed with the point of a needle. The earliest mention of these small 'worms' as far as the writer is aware, is that by Ch'ao Yuan-fang (610) in Ch'ao shih chu ping yuan hou tsung lun, *Ch'ao's General Treatise on the Aetiology and Symptoms of Diseases*. In those publications in which Chinese authors mention small worms in scabies they are not regarded as causative agents but rather as a result of the disease in the same way as early European writers did. The advice given by some authors to remove the minute worms with a needle indicates, however, that although the mite may not have been regarded as the direct cause of scabies, its presence was evidently believed to be harmful so that its removal seemed desirable."[17]


疥者有數種有大疥有馬疥有水疥有乾疥有濕疥多
生手足乃至遍體大疥者作瘡有膿汁燉赤痒痛是也
馬疥者皮内隱嶙起作根塊搔之不知痛此二者則重
水疥者瘡瘺如小瘭摘破有水出此一種小輕乾疥者
但痒搔之皮起作乾痂濕疥者小瘡皮薄常有汁出並
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膚受風邪熱氣所致也
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不爲其湯熨針石别有正方補養宣導今附於後
養生方導引法云龍行氣叩頭下視不息十二通愈風
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乾疥候
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也
乾疥但痒搔之皮起作乾痂此風熱氣深在肌肉間故

欽定四庫全書
巢氏諸病源候總論

For the record - No. 1

The above image is the page of the *Treatise on the Origins and Manifestations of Various Diseases* (诸病源候论, zhū bìng yuán hòu lùn) by Chao Yuanfang (ca. 550-630), the words highlighted with red sidelines are translated above. It is probably the oldest medical book in the world which associates scabies with an animal.

About 400 years after China's Chao Yuanfang, an Arabian physician named Abu-l-Hasan Ahmad ibn Mohammad al-Tabari wrote:

> "This animacule can be removed with the point of a needle. If placed on the nail and exposed to the heat of the sun or fire, it moves. If the animacule is crushed between the fingernails, one hears it crack. This type of scabies is most easily cured ... by administering laxatives and the killing of the animals."[18]

It took about another two centuries for the Europeans, especially Saint Hildegard in her book *Physika* written in the 12th century, to link the little animal with scabies[19].

Although these earlier people didn't propose the hypothesis that the worm is the cause of scabies, such an idea had been slowly evolving right before Bonomo made his discovery. Guy de Chauliac (c. 1300 - 1368), a French physician, not only could find the itch mite, he also realized the contagiousness of the disease[20]. In the 16th century, another French physician, Ambroise Paré (c. 1510 - 1590), wrote:

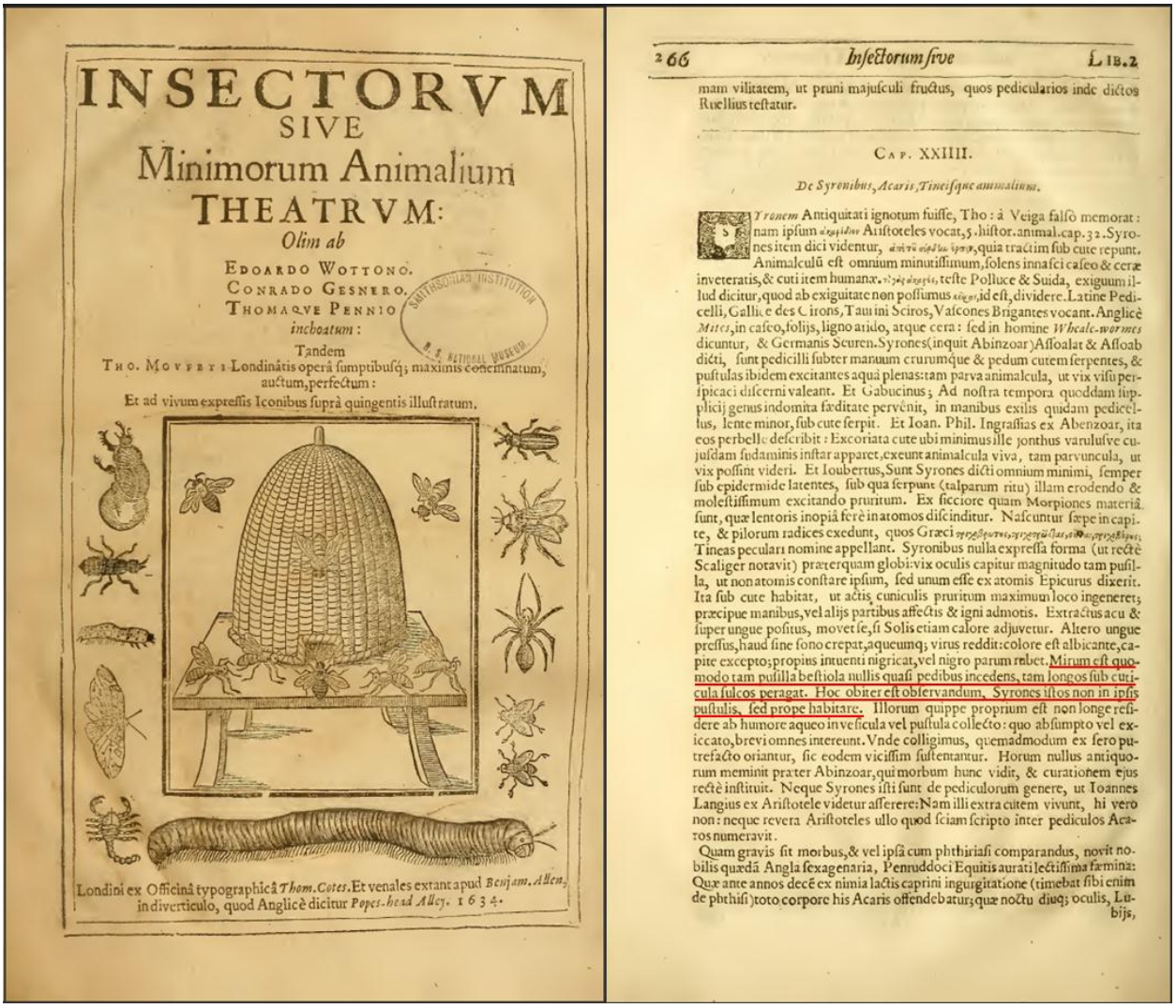
> "The mites are little animals, always hidden under the skin, there they crawl and gnaw the skin, little by little, exciting a disagreeable itching. They can be extracted with pins or needles."[21]

In 1634, a book by Thomas Mouffet (1553-1604) was published in London, in which it says:

> "It is strange how such a little animal with almost no feet can drive such a long burrow

> under the skin. Moreover, it is to be noted that these mites do not lie in the pustules themselves, but near them."[22]

Austrian physician Ferdinand Hebra (1816-1880) believed that these sentences "show that he had himself looked for the *acarus scabiei*, and had been successful in finding it."[23] Hungarian dermatologist Moriz Kaposi (1837-1902) praised Mouffet's description of the mite as "accurate."[24]



INSECTORVM
SIVE
Minimorum Animalium
THEATRVM:
Olim ab
EDOARDO WOTTONO.
CONRADO GESNERO.
THOMAQVE PENNIO
inchoatum:
Tandem
THO. MOVFFETI Londinâtis operâ sumptibusq; maximis concinnatum, auctum, perfectum:
Et ad vivum expressis Iconibus suprà quingentis illustratum.

Londini ex Officinâ typographicâ *Thom. Cotes.* Et venales extant apud *Benjam. Allen*, in diverticulo, quod Anglicè dicitur *Popes-head Alley.* 1634.

266 *Insectorum sive* Lib. 2

mam vilitatem, ut pruni majusculi fructus, quos pedicularios inde dictos Ruellius testatur.

CAP. XXIIII.

De Syronibus, Acaris, Tineisque animalium.

SYronem Antiquitati ignotum fuisse, Tho: à Veiga falsò memorat: nam ipsum ἀκαρίδιον Aristoteles vocat, 5. histor. animal. cap. 32. Syrones item dici videntur, ἀπὸ τοῦ σύρεσθαι ὑφ' ὑγρου, quia tractim sub cute repunt. Animalculũ est omnium minutissimum, solens innasci caseo & ceræ inveteratis, & cuti item humanæ. νῦν ἀπὸ τοῦ ἀκαίρου, teste Polluce & Suida, exiguum illud dicitur, quod ab exiguitate non possumus κάειν, id est, dividere. Latine Pedicelli, Gallicè des Cirons, Tauri ini Sciros, Vascones Brigantes vocant. Anglicè *Mites*, in caseo, folijs, ligno arido, atque cera: sed in homine *Wheale-wormes* dicuntur, & Germanis Scuren. Syrones (inquit Abinzoar) Assoalat & Assoab dicti, sunt pedicilli subter manuum crurumque & pedum cutem serpentes, & pustulas ibidem excitantes aquâ plenas: tam parva animalcula, ut vix visũ perspicaci discerni valeant. Et Gabucinus; Ad nostra tempora quoddam simplicij genus indomita fœditate pervênit, in manibus exilis quidam pedicellus, lente minor, sub cute serpit. Et Ioan. Phil. Ingrassias ex Abenzoar, ita eos perbellè describit: Excoriata cute ubi minimus ille jonthus varulusve cujusdam sudaminis instar apparet, exeunt animalcula viva, tam parvuncula, ut vix possint videri. Et Ioubertus, Sunt Syrones dicti omnium minimi, semper sub epidermide latentes, sub quâ serpunt (talparum ritu) illam erodendo & molestissimum excitando pruritum. Ex ficciore quam Morpiones materiâ sunt, quæ lentoris inopiâ ferè in atomos discinditur. Nascuntur sæpe in capite, & pilorum radices exedunt, quos Græci σκωληκοβρωτικὰς, σκωληκοβρωτικὰ πλάσματα, σκωληκοβρώτους; Tineas peculari nomine appellant. Syronibus nulla expressa forma (ut rectè Scaliger notavit) præterquam globi: vix oculis capitur magnitudo tam pusilla, ut non atomis constare ipsum, sed unum esse ex atomis Epicurus dixerit. Ita sub cute habitat, ut actis cuniculis pruritum maximum loco ingeneret; præcipue manibus, vel alijs partibus affectis & igni admotis. Extractus acu & super ungue positus, movet se, si Solis etiam calore adjuvetur. Altero ungue pressus, haud sine sono crepat, aqueumq; virus reddit: colore est albicante, capite excepto; propius intuenti nigricat, vel nigro parum rubet. Mirum est quomodo tam pusilla bestiola nullis quasi pedibus incedens, tam longos sub cuticula sulcos peragat. Hoc obiter est observandum, Syrones istos non in ipsis pustulis, sed prope habitare. Illorum quippe proprium est non longe residere ab humore aqueo in vesicula vel pustula collecto: quo absumpto vel exiccato, brevi omnes intereunt. Vnde colligimus, quemadmodum ex fero putrefacto oriantur, sic eodem vicissim sustentantur. Horum nullus antiquorum meminit præter Abinzoar, qui morbum hunc vidit, & curationem ejus rectè instituit. Neque Syrones isti sunt de pediculorum genere, ut Ioannes Langius ex Aristotele videtur asserere: Nam illi extra cutem vivunt, hi verò non: neque revera Aristoteles ullo quod sciam scripto inter pediculos Acaros numeravit.

Quam gravis sit morbus, & vel ipsâ cum phthiriasi comparandus, novit nobilis quædã Angla sexagenaria, Penruddoci Equitis aurati lectissima fœmina: Quæ ante annos decẽ ex nimia lactis caprini ingurgitatione (timebat sibi enim de phthisi) toto corpore his Acaris offendebatur; quæ noctu diuq; oculis, Lubijs,

For the record - No. 2

The 16th century Englishman Thomas Mouffet not only saw the itch mite, he also knew where to find it.

In 1612, a dictionary edited by the Accademici della Crusca defined "pellicello," an Italian term for scabies, as the following:

> "Pellicello è un picciolissimo bacolino, ilquale si genera a'rognosi, in pelle in pelle, e, rodendo, cagiona un'acutissimo pizzicóre."[25]

Here is the comment on the entry by Hebra:

> "The point of interest in this sentence is that the writer evidently recognised the acarus as the *cause* of scabies; whereas his contemporaries imagined that its presence in patients affected with the disease was merely accidental."[26]

VOCABOLARIO
DEGLI
ACCADEMICI
DELLA
CRVSCA,
CON TRE INDICI DELLE VOCI,
locuzioni, e prouerbi Latini, e Greci, posti per entro l'Opera.
CON PRIVILEGIO DEL SOMMO PONTEFICE,
Del Re Cattolico, della Sereniſſima Repubblica di Venezia, e degli
altri Principi, e Potentati d'Italia,
E FVOR D'ITALIA, DELLA MAESTA CESAREA,
Del Re Criſtianiſſimo, e del Sereniſſ. Arciduca Alberto.

PIV NE
IL BEL FIOR COGLIE

PELLICELLA. Dimin. di pelle. Lat. *Pellicula*. Cr. 9. 86. 9. La pipita a queſti ancora nuocer ſuole, la quale è una bianca pellicella, che naſce in ſu la punta della lingua. ¶ PELLICELLO è un picciolisſimo bacolino, ilquale ſi genera a' rognoſi, in pelle in pelle, e, rodendo, cagiona un'acutiſſimo pizzicóre.
PELLICELLO Vedi PELLICELLA.

For the record - No. 3

The term "pellicello" was explained as being caused by the biting of the itch mite in *Vocabolario degli Accademici della Crusca*, published in 1612 in Florence, Italy.

Bonomo, in his letter to Redi in which he described his discovery, actually acknowledged that his first knowledge of scabies was from the dictionary:

> "Mentre dunque tutto attento mi trattengo in questa curiosa, e dilettevole applicazione, e distendone in carta il da me Osservato, per poterlo un giorno comunicare al pubblico del Mondo, se non con gentilezza di stile, almeno con pura, semplice, e schiettissima verità, mi è venuto casualmente, e per fortuna letto nel famoso *Vocabolario dell'Accademia della Crusca*, che i Compilatori di esso affermano, che i Pellicelli, de' quali per lo più è gremita internamente la pelle di coloro, che hanno la rogna, sieno altrettanti piccolissimi Animaletti; e quest'esse sono le parole del medesimo Vocabolario. *Pellicello è un piccolissimo Bacolino, il quale si genera a' Rognosi in pelle in pelle, e rodendo cagiona un'acutissimo pizzicore.*"[27]

Apparently based upon the fact, as well as the common practice among the poor Italians who tried to cure scabies by removing the mites with a needle, that Redi refused to acknowledge the originality of Bonomo's discovery[28].

Besides the dictionary, Bonomo also acknowledged the following fact to Redi:

> "Quest'opinione, come poi ho veduto, fu seguita da Giuseppe Laurenzio nella sua Amaltea avendovi scritto."[27]

which appears to be the source of the following statement by Dr. B. Barker Beeson:

> "Joseph Lorenzo, in his 'Almanthea,' recognized Acarus as the cause of scabies."[21]

It is generally acknowledged that August Hauptmann (1607-1674) was the first person who drew the image of itch mite, and the drawing was significantly improved 25 years later by his countryman Michael Ettmüller (1644-1683)[21, 29].

Flemish chemist Jan Baptist van Helmont (1577-1644) described how he contacted scabies by shaking hands with a lady, and his physician failed to cure his disease based on Galen's humoral theory of the disease, and then he, by using the empiricism method, eliminated the possibility that the disease was caused by humoral or internal factors, and he finally cured himself by external application of a sulphur ointment[30].

In other words, the major components of Bonomo's discovery, i. e. the claim that the mite is the sole cause of the scabies, the drawing of the microscopic image of the mite, and the suggestion for external treatment of the disease, had already been in existence before Bonomo discovered them.

(2) Bonomo vs. Cestoni

According to Fang, not only did Bonomo make the original discovery, he also made the discovery alone, the role played by Diacinto Cestoni, a pharmacist, in the discovery was merely accessory.

The fact is, the important and indispensable contribution by Cestoni to the discovery was acknowledged right in Bonomo's letter to Redi, in which the discovery was first announced to the world[27]. Further, since its "re-discovery" in the 19th century, most historians of medicine, if not all of them, recognized Cestoni's role played in the discovery. Here is what was written by the great French physician Pierre François Rayer (1793-1867) in a book its English translation was published in 1833:

> "The letter of Giovanni Cosmo Bonomo, relating the experiments of Hyacinthe Cestoni, printed in several modern works, is too interesting in the history of science to be passed over."[31]

Here is what was written by Dr. Hebra in a book its English translation was published in 1868:

> "In the seventeenth century the most complete investigations with reference to the *acarus scabiei* and its relation to the itch were those of Giovanni Cosimo Bonomo, a physician, and Diacinto Cestoni, an apothecary, at Leghorn."[32]

Here is what was written by Hungarian Dr. Moriz Kaposi in a book its English translation was published in 1895:

> "In 1687 Bonomo and Cestoni gave accurate descriptions and drawings of the acarus and its ova; stated that the acari were of both sexes, and that they were the sole cause of itch."[24]

In 1932, Dr. Ugo Faucci, an Italian historian of medicine, published a monograph entitled *Contributo alla storia della scabbia*, in which he stated that "probably the naturalistic study of the acarus is due to Cestoni, a very clever researcher, while Bonomo, a very keen naval physician, is responsible for the observations regarding to the external cure of scabies."[33] Despite this, Faucci concluded:

> "……as the proofs that would better permit us to ascertain the truth are wanting, the discovery of the parasite nature of the itch must be attributed to Bonomo and Cestoni together."[34]

Faucci's conclusion has been generally accepted, of course with a couple of exceptions including Fang Zhouzi. In 1989, a review published in Annual Review of Entomology says:

> "The Italians Giovanni Cosimo Bonomo and Diancinto Cestoni first described and illustrated the mite in 1689 in a now-famous letter to Francesco Redi."[35]

In 1991, a pair of Italian scholar published a paper entitled "*G.C. Bonomo and D. Cestoni. Discoverers of the parasitic origin of scabies*."[36]

In 2006, a paper published in *Lancet* says:

> "In 1687, the Italian physician Giovan Cosimo Bonomo and the apothecary Diacinto Cestoni described the causal relation between the scabies mite and the typical skin lesions seen after infestation. They showed for the first time that a disease can be caused by a microorganism."[37]

In 2011, another paper published in *Annals of the New York Academy of Sciences* says:

> "In the 17th century, Hauptman produced imperfect drawings of the mite, followed by Giovanni Cosimo Bonomo, an Italian naval physician, who with Diacinto Cestoni, a pharmacist, studied the condition in sailors and provided a more accurate drawing of the acarus mite in 1687, thus discovering and establishing the parasitic nature of scabies as well as its treatment."[38]

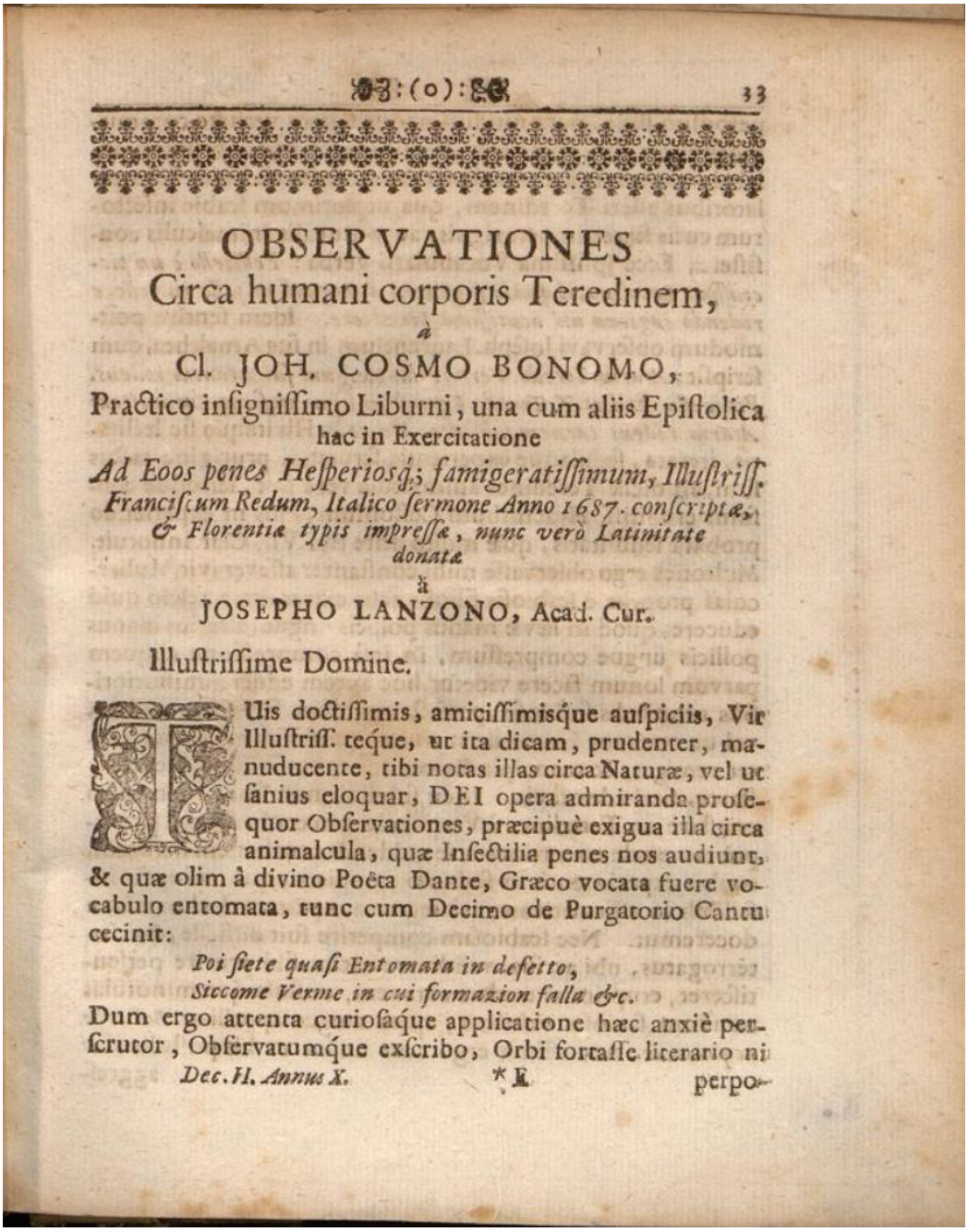
The fact is, Cestoni was a well-known and well-respected naturalist, it was said that Redi had said of Cestoni: "He is a chemist, but he knows more than 40 physicians."[39] Actually, one and a half months before Bonomo sent the letter to Redi, Redi wrote in a letter saying that Cestoni was the only person who observed the scabies mite[40]. On the other hand, even today, little about Bonomo, except for he was 24 years old when he communicated his discovery to Redi, is known[41]. It appears that it was Cestoni who introduced Bonomo to Redi, and with Redi's recommendation, Bonomo got his job as a naval physician[42].

(3) The Post-Bonomo Era

According to Fang's story, Bonomo's discovery "was not mentioned by any other people and forgotten" until 1844, when the Austrian physician Ferdinand Hebra eulogized him, along with Cestoni, and Hebra's eulogy made their names recognized in the history of medicine. The fact is, nothing could be further from the truth than Fang's story. Here is what was written by Hebra:

> "Lucas Tozzius, Lanzoni, and Richard Mead remain to be mentioned as having translated, and commented on, the works of Cestoni and Bonomo, and as having thereby aided in diffusing more widely a knowledge of the important facts contained in their writings."[43]

I couldn't find any information about the translation of or comment on Bonomo's letter to Redi by Lucas Tozzius. However, it is widely known that Bonomo's letter was translated in its entirety into Latin by Lanzoni in 1692[44], and partially into English by Richard Mead (1673-1754) in 1703[45].



33

OBSERVATIONES
Circa humani corporis Teredinem,
à
Cl. JOH. COSMO BONOMO,
Practico insignissimo Liburni, una cum aliis Epistolica hac in Exercitatione
Ad Eoos penes Hesperiosq; famigeratissimum, Illustriss. Franciscum Redum, Italico sermone Anno 1687. conscriptæ, & Florentiæ typis impressæ, nunc verò Latinitate donatæ
à
JOSEPHO LANZONO, Acad. Cur.

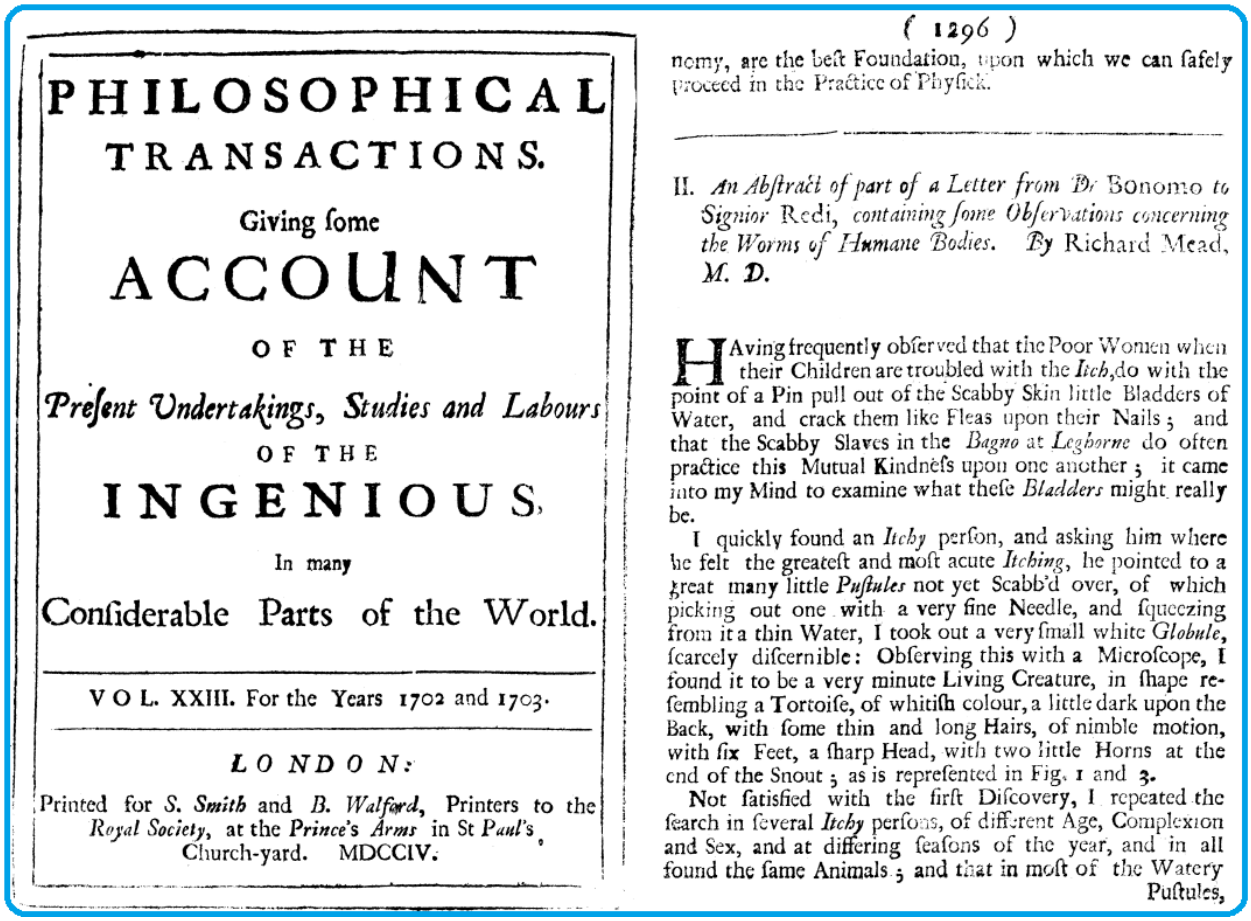
Illustrissime Domine.

TUis doctissimis, amicissimisque auspiciis, Vir Illustriss. teque, ut ita dicam, prudenter, manuducente, tibi notas illas circa Naturæ, vel ut sanius eloquar, DEI opera admiranda prosequor Observationes, præcipuè exigua illa circa animalcula, quæ Insectilia penes nos audiunt, & quæ olim à divino Poëta Dante, Græco vocata fuere vocabulo entomata, tunc cum Decimo de Purgatorio Cantu cecinit:

Poi siete quasi Entomata in defetto,
Siccome Verme in cui formazion falla &c.

Dum ergo attenta curiosaque applicatione hæc anxiè perscrutor, Observatumque exscribo, Orbi fortasse literario ni

For the record - No. 4
Bonomo's letter to Redi was translated completely into Latin by Josepho Lanzono and the translation was published in a book in 1692.



PHILOSOPHICAL
TRANSACTIONS.
Giving some
ACCOUNT
OF THE
Present Undertakings, Studies and Labours
OF THE
INGENIOUS,
In many
Considerable Parts of the World.

VOL. XXIII. For the Years 1702 and 1703.

LONDON:

Printed for *S. Smith* and *B. Walford*, Printers to the *Royal Society*, at the *Prince's Arms* in St *Paul's* Church-yard. MDCCIV.

(1296)

nomy, are the best Foundation, upon which we can safely proceed in the Practice of Physick.

II. *An Abstract of part of a Letter from Dr* Bonomo *to Signior* Redi, *containing some Observations concerning the Worms of Humane Bodies.* By Richard Mead, *M. D.*

HAving frequently observed that the Poor Women when their Children are troubled with the *Itch*, do with the point of a Pin pull out of the Scabby Skin little Bladders of Water, and crack them like Fleas upon their Nails; and that the Scabby Slaves in the *Bagno* at *Leghorne* do often practice this Mutual Kindness upon one another; it came into my Mind to examine what these *Bladders* might really be.

I quickly found an *Itchy* person, and asking him where he felt the greatest and most acute *Itching*, he pointed to a great many little *Pustules* not yet Scabb'd over, of which picking out one with a very fine Needle, and squeezing from it a thin Water, I took out a very small white *Globule*, scarcely discernible: Observing this with a Microscope, I found it to be a very minute Living Creature, in shape resembling a Tortoise, of whitish colour, a little dark upon the Back, with some thin and long Hairs, of nimble motion, with six Feet, a sharp Head, with two little Horns at the end of the Snout; as is represented in Fig. 1 and 3.

Not satisfied with the first Discovery, I repeated the search in several *Itchy* persons, of different Age, Complexion and Sex, and at differing seasons of the year, and in all found the same Animals; and that in most of the Watery Pustules,

For the record - No. 5

Richard Mead's partial English translation of Bonomo's letter to Redi made the discovery known to the English world.

The fact is, because of his prominent status - Dr. Mead was admitted to the Royal Society of London in 1703 and appointed the physician to George II in 1727[46] -, and his constant effort - he repeatedly mentioned the Italian discovery in his works[47] -, Mead almost single-handedly made Bonomo's discovery known to every English physician. For example, in 1752, Sir John Pringle (1707-1782), the "father of military medicine," published his celebrated *Observations on the Diseases of the Army in Camp and Garrison*, in which he was not aware of the parasitic nature of scabies at all. However, when the book went to reprint the next year, Dr. Pringle especially added the following note:

> "Since the first edition was published, I have seen a paper in the Phil. Transact. for the year 1703, called, *An abstract of a letter from Dr. Bonomo to Sigmor Redi, containing some observations concerning the worms of humane bodies*, by Dr. Richard Mead. By which account I find, that Dr. Bonomo was the first that discovered these animalcula, and likewise proposed curing the itch by externals only."[48]

Dr. John Hunter (1728-1793), another eminent British physician, told the following story in his *Lectures on the Principle of Surgery*:

> "The disease has been said to arise from animalculae; but these, if present, are, I am sure, unnecessary for the existence of the disease, as I have often examined the matter and found no animals in it; yet they may sometimes be in the matter. I forget who was telling me lately that Dr. Teigh had shown them to be, not in the pustule, but in the skin near it, as little black

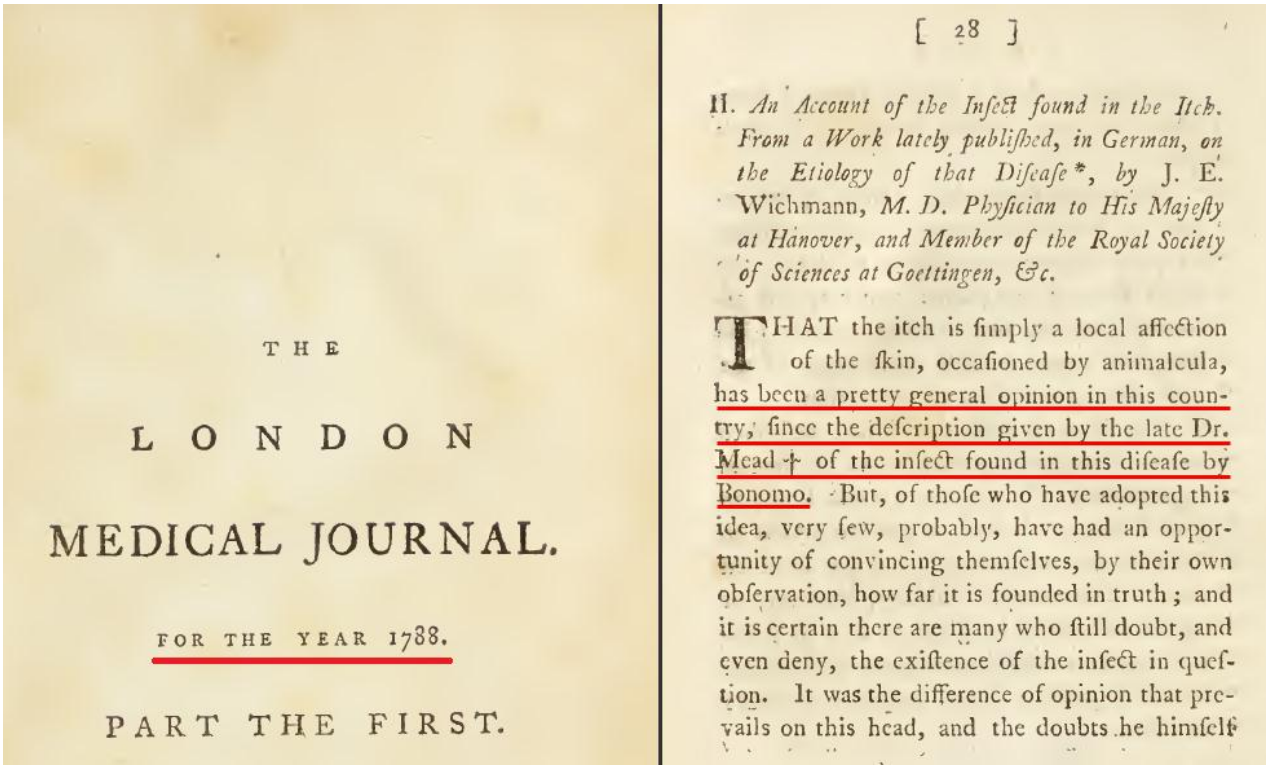
specks."[49]

In other words, whether people believed it or not, they were aware of the theory proposed by Bonomo and Cestoni. Apparently because of this, in 1755, when Samuel Johnson's influential *A Dictionary of the English Language* was published, the word "itch" was defined as the following:

> "a cutaneous disease extremely contagious, which overspreads the body with small pustules filled with thin serum, and raised, as microscopes have discovered, by a small animal. It is cured by sulphur."[50]

And by 1788, *The London Medical Journal* proclaimed:

> "THAT the itch is simply a local affection of the skin, occasioned by animalcula, has been a pretty general opinion in this country, since the description given by the late Dr. Mead of the insect found in this disease by Bonomo."[51]



THE

LONDON

MEDICAL JOURNAL.

FOR THE YEAR 1788.

PART THE FIRST.

[28]

II. *An Account of the Inſect found in the Itch. From a Work lately publiſhed, in German, on the Etiology of that Diſeaſe*, by* J. E. Wichmann, *M. D. Phyſician to His Majeſty at Hanover, and Member of the Royal Society of Sciences at Goettingen, &c.*

THAT the itch is ſimply a local affection of the ſkin, occaſioned by animalcula, has been a pretty general opinion in this country, ſince the deſcription given by the late Dr. Mead † of the inſect found in this diſeaſe by Bonomo. But, of thoſe who have adopted this idea, very few, probably, have had an opportunity of convincing themſelves, by their own obſervation, how far it is founded in truth; and it is certain there are many who ſtill doubt, and even deny, the exiſtence of the inſect in queſtion. It was the difference of opinion that prevails on this head, and the doubts he himſelf

For the record - No. 6

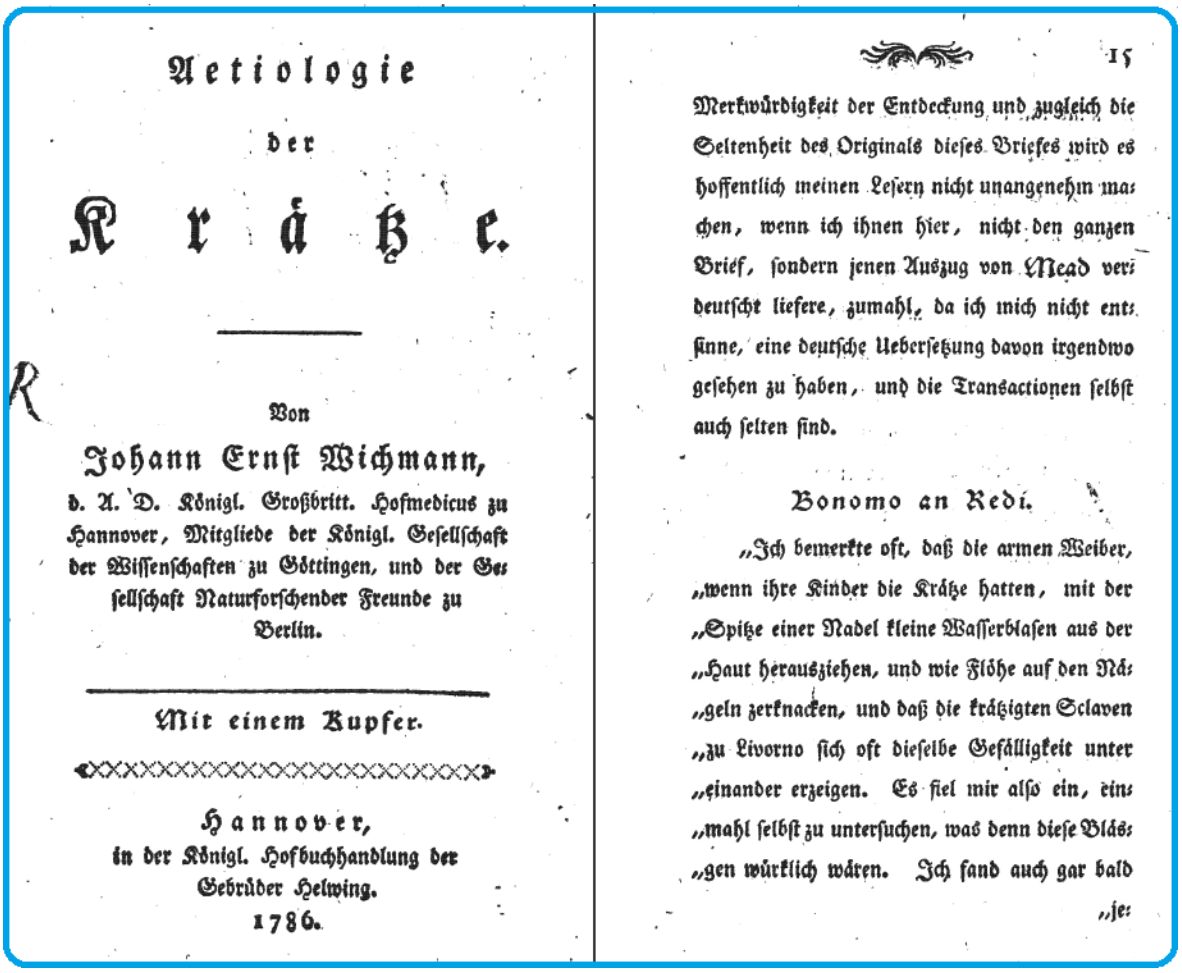
By 1788, Bonomo and Cestoni's theory had already become "a pretty generally accepted opinion" in the Great Britain.

As a matter of fact, in 1801, Dr. Joseph Adams (1756-1818), yet another renowned British physician, inoculated the itch mites on himself, and described the symptom he suffered from the inoculation. Of course he was aware of the work by Bonomo, saying: "Bonomo was tolerably exact in his description."[52]

The Great Britain was not the only place where Bonomo's discovery was widely known. In 1722, German physician Augustus Quirinus Rivinus (1652-1723) and Johann Jacob Schwiebe published a booklet entitled *Dissertatio Inauguralis De Pruritu Exanthematum Ab Acaris*, in which although they didn't mention Bonomo or Cestoni's name, they drawings were partially based on the observation made by the latter, according to Hebra[53]. In 1786, another German physician Johann Ernst

Wichmann (1740-1802) published his book, *Aetiologie der Krätze*, in which he not only repeatedly referred the letter and compared Bonomo's drawing of the itch mite with his own, he went so far as to translate the letter, from Mead's English translation, into German[54]. Here is his summary of his own work:

> "I hope I have now thoroughly explained and proved the etiology of scabies, or at least rendered it both plausible and logical that it is a simple skin disease caused by mites."[55]



Aetiologie

der

Krätze.

Von

Johann Ernst Wichmann,

d. A. D. Königl. Großbritt. Hofmedicus zu Hannover, Mitgliede der Königl. Gesellschaft der Wissenschaften zu Göttingen, und der Gesellschaft Naturforschender Freunde zu Berlin.

Mit einem Kupfer.

Hannover,
in der Königl. Hofbuchhandlung der Gebrüder Helwing.
1786.

15

Merkwürdigkeit der Entdeckung und zugleich die Seltenheit des Originals dieses Briefes wird es hoffentlich meinen Lesern nicht unangenehm machen, wenn ich ihnen hier, nicht den ganzen Brief, sondern jenen Auszug von Mead verdeutscht liefere, zumahl, da ich mich nicht entsinne, eine deutsche Uebersetzung davon irgendwo gesehen zu haben, und die Transactionen selbst auch selten sind.

Bonomo an Redi.

„Ich bemerkte oft, daß die armen Weiber, „wenn ihre Kinder die Krätze hatten, mit der „Spitze einer Nadel kleine Wasserblasen aus der „Haut herausziehen, und wie Flöhe auf den Nä„geln zerknacken, und daß die krätzigten Sclaven „zu Livorno sich oft dieselbe Gefälligkeit unter „einander erzeigen. Es fiel mir also ein, ein„mahl selbst zu untersuchen, was denn diese Blä„gen würklich wären. Ich fand auch gar bald „je-

For the record - No. 7

In a book published in 1786, German physician Johann Ernst Wichmann not only introduced his etiological study on scabies, he also translated Richard Mead's English translation of Bonomo's letter to Redi into German.

Here is the comment on his work by Hebra:

> "……his knowledge of the disease was so complete, that in this respect he has been surpassed by none of his predecessors, and by few even of those who have followed him. He was perfectly acquainted with the burrows made by the itch-mite, and with the papules (Efflorescenzen) near which young acari are to be found; and he describes exactly how to extract the animal from these different places with the point of a needle or penknife."[56]

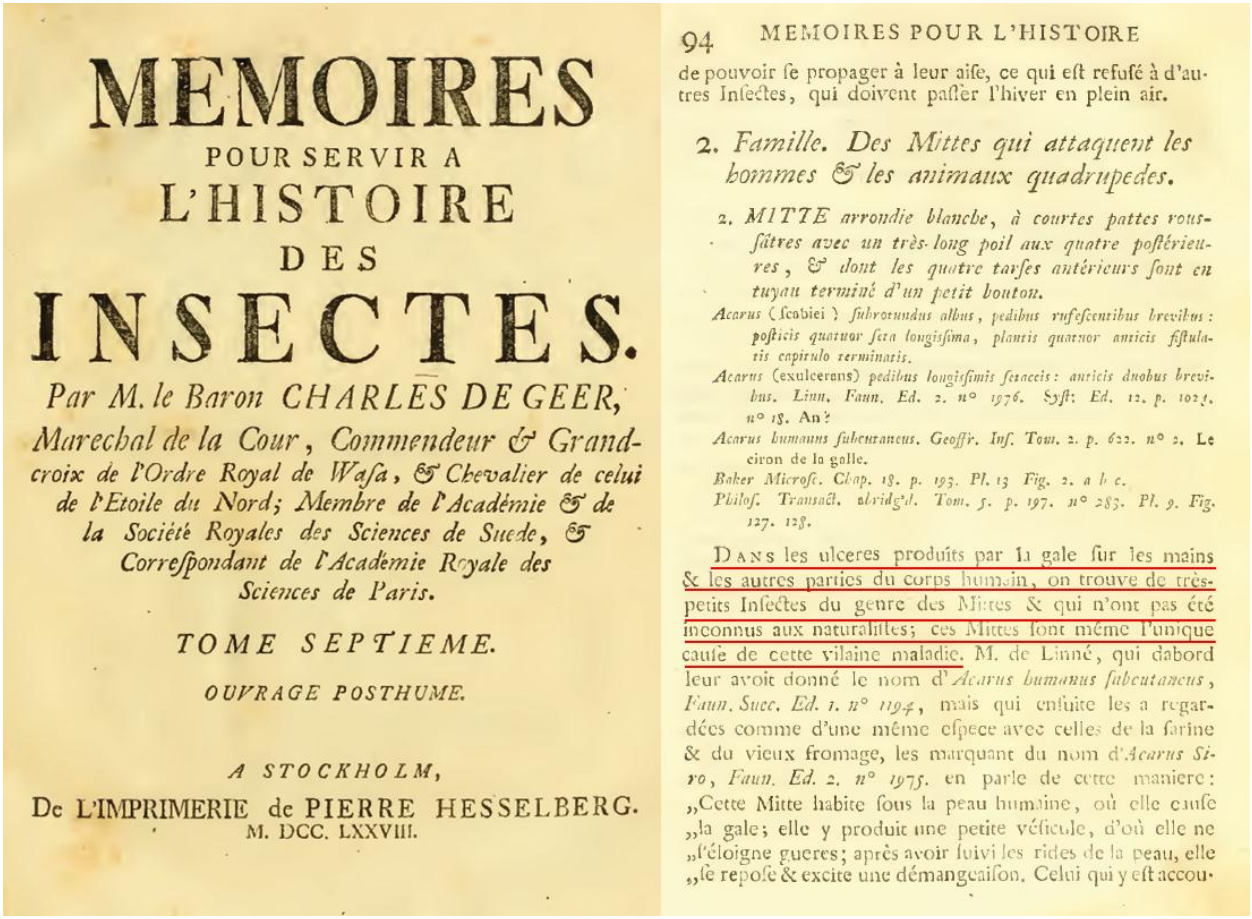
Beeson's praise of Wichmann was not a bit less lavish than Hebra's:

> "Wichman's booklet, 'Etiology of the Itch', which was printed at Hanover in 1786, was a

most important factor in spreading the belief that the itch was due to Acarus. This work was not surpassed by those preceding it, and has been surpassed by few since that time. Wichman recognized the importance of the burrow, as well as of the tiny elevations near which the larvae were found. He also knew how to extract the mite on a knife or needle point."[21]

Besides Great Britain and Germany, Bonomo and Cestoni's theory was warmly received in Sweden also. In 1746, the eminent Swede Carl Linnaeus (1707-1778) named the itch mite *acaru humanu subcutaneous*[57]. 11 years later, one of Linnaeus' students claimed in his thesis, correctly, that the itch mite doesn't exist in the pustules, rather, it could be found in "a wrinkling of the skin which proceeds from the pustule."[21] In 1778, the book *Memoires pour servir à l'histoire des Insectes* (Vol. VII) by another great Swede, Baron Charles de Geer (1720-1778), was published posthumously, in which the author wrote explicitly:

"Dans les ulceres produits par la gale sur les mains & les autres parties du corps humain, on trouve de trèspetits Insectes du genre des Mittes & qui n'ont pas été inconnus aux naturalistes; ces Mittes sont même l'unique cause de cette vilaine maladie."[58]



MEMOIRES
POUR SERVIR A
L'HISTOIRE
DES
INSECTES.
Par M. le Baron CHARLES DE GEER,
Marechal de la Cour, Commendeur & Grand-croix de l'Ordre Royal de Wasa, & Chevalier de celui de l'Etoile du Nord; Membre de l'Académie & de la Société Royales des Sciences de Suede, & Correspondant de l'Academie Royale des Sciences de Paris.
TOME SEPTIEME.
OUVRAGE POSTHUME.
A STOCKHOLM,
De L'IMPRIMERIE de PIERRE HESSELBERG.
M. DCC. LXXVIII.

94 MEMOIRES POUR L'HISTOIRE
de pouvoir se propager à leur aise, ce qui est refusé à d'autres Insectes, qui doivent passer l'hiver en plein air.

2. *Famille. Des Mittes qui attaquent les hommes & les animaux quadrupedes.*

2. *MITTE arrondie blanche, à courtes pattes roussâtres avec un très-long poil aux quatre postérieures, & dont les quatre tarses antérieurs sont en tuyau terminé d'un petit bouton.*

Acarus (scabiei) subrotundus albus, pedibus rufescentibus brevibus: posticis quatuor seta longissima, plantis quatuor anticis fistulatis capitulo terminatis.

Acarus (exulcerans) pedibus longissimis setaceis: anticis duobus brevibus. Linn. Faun. Ed. 2. n° 1976. Syst: Ed. 12. p. 1023. n° 18. An?

Acarus humanus subcutaneus. Geoffr. Inf. Tom. 2. p. 622. n° 2. Le ciron de la galle.

Baker Microsc. Chap. 18. p. 193. Pl. 13 Fig. 2. a b c.

Philos. Transact. abridg'd. Tom. 5. p. 197. n° 283. Pl. 9. Fig. 127. 128.

DANS les ulceres produits par la gale sur les mains & les autres parties du corps humain, on trouve de très-petits Insectes du genre des Mittes & qui n'ont pas été inconnus aux naturalistes; ces Mittes sont même l'unique cause de cette vilaine maladie. M. de Linné, qui dabord leur avoit donné le nom d'*Acarus humanus subcutaneus*, *Faun. Suec. Ed. 1. n° 1194*, mais qui ensuite les a regardées comme d'une même espece avec celles de la farine & du vieux fromage, les marquant du nom d'*Acarus Siro*, *Faun. Ed. 2. n° 1975.* en parle de cette maniere: „Cette Mitte habite sous la peau humaine, où elle cause „la gale; elle y produit une petite vésicule, d'où elle ne „s'éloigne gueres; après avoir suivi les rides de la peau, elle „se repose & excite une démangeaison. Celui qui y est accou-

For the record - No. 8
In a book published posthumously in 1778, Baron Charles de Geer stated explicitly that many naturalists at the time were aware the fact or theory that the itch mite is the sole cause of scabies.

Were Linnaeus and his Swedish comrades aware of or influenced by Bonomo's discovery? Of course. In 1768, Swedish physician Nils Rosén von Rosenstein (1706-1773) mentioned Bonomo's name in a book[59]. Ten years later, in his another book, not only was Bonomo's name mentioned, the Latin

translation of his letter to Redi was also referred[60]. According to French scientist François-Vincent Raspail, "Linnaus himself founded his specific distinctions on the figures of Bonomo."[61]

However, Bonomo's seed bore the biggest fruit in France. According to Beeson[21], French physician Anne-Charles Lorry (1726-1783) referred Bonomo's letter to Redi in a book published in 1777. In 1804, a book by Italian physician Valérian Louis Brera (1772-1840) was translated into French and published in Paris, in which, Bonomo's discovery was mentioned[62].

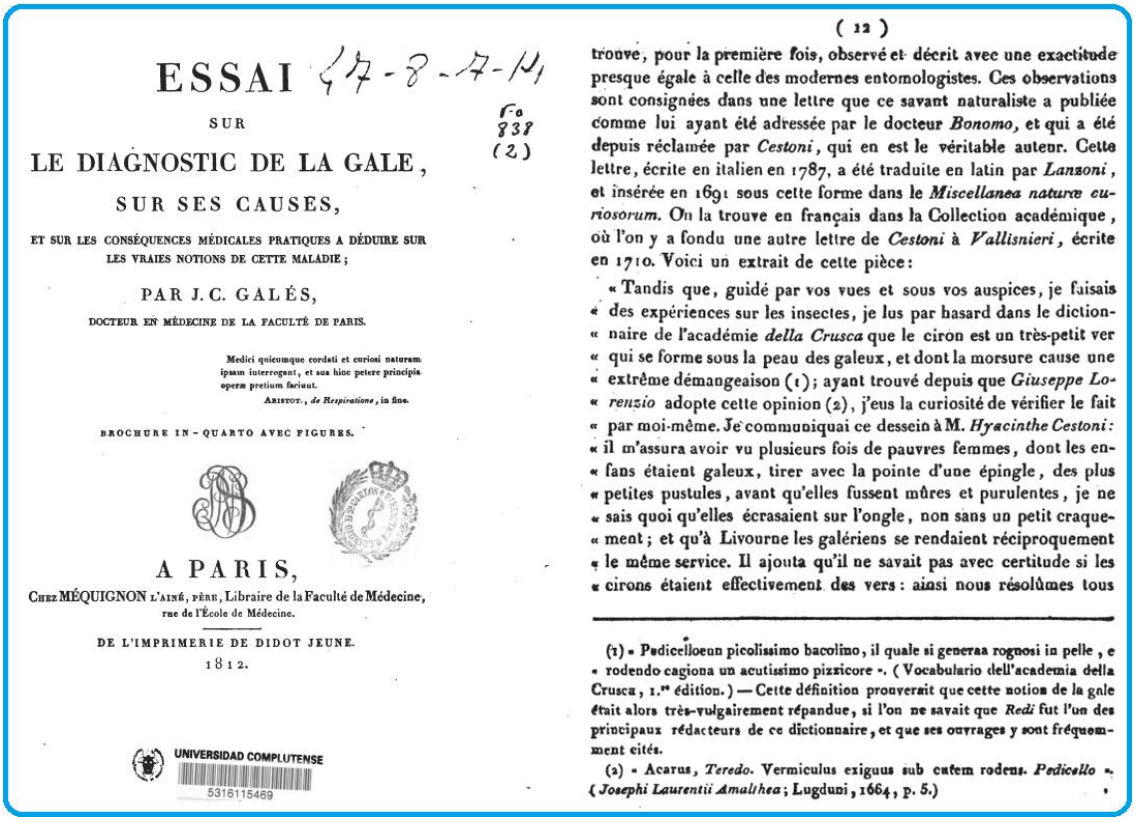
In 1812, French medical student Jean-Chrysanthe Galès, encouraged and advised by the prominent dermatologist Jean-Louis-Marc Alibert (1768-1837), announced that he had found itch mite in the fluid from the vesicle on the scabies patients[63]. However, the significance of his thesis is not what he discovered in the scabies patients, but what he discovered in the ancient literature: in his thesis, which consists of only 55 pages, Galès used 6 pages for the French translation of "Cestoni's letter to Redi" - Yes, that was what he called the famous letter -, apparently made by himself from Lanzono's Latin translation, and he praised Cestoni's investigation wholeheartedly:

> "C'est dans les ouvrages de Redi que l'insecte de la gale humaine se trouve, pour la première fois, observé et décrit avec une exactitude presque égale à celle des modernes entomologistes. Ces observations sont consignées dans une lettre que ce savant naturaliste a publiée comme lui ayant été adressée par le docteur Bonomo, et qui a été depuis réclamée par Cestoni, qui en est le véritable auteur."[64]
>
> "Dans la suite de la lettre, Cestoni conclut, contre l'opinion des anciens et celle qui dominait de son temps, que le ciron de la gale en est la véritable cause; ce qu'il prouve, tant par l'explication satisfaisante et facile que cette cause fournit de tous les phénomènes de la maladie, que par la nature du seul traitement efficace qu'on puisse employer. L'oubli dans lequel la dissertation de Cestoni est restée pendant quelque temps, et le peu d'influence qu'élle eut d'abord, sont un exemple de la peine que les observations les plus exactes et les plus concluantes en médecine avaient alors à prévaloir sur les opinions et les pratiques accréditées."[65]
>
> "Les preuves les plus concluantes de l'étiologie de la gale sont pour le fond renfermées dans la lettre de Cesloni à Redi,que j'ai déjà citée en grande partie. (Voy. p. 12.) La justice, non moins que la nature de mon sujet,m'impose l'obligation de faire connaître le reste de celle lettre: je la reprends où je l'ai interrompue."[66]
>
> "Les raisonnemens de Cestoni, l'explication qu'il donne de tous les effets de la gale, examinés murement et sans prévention, doivent, il me semble, paraître suffisans pour établir l'étiologie de celle affection aussi clairement que celle de la maladie la mieux connue."[67]

Here is what being said of his thesis by an English introduction:

> "Moufet was the first naturalist who mentions the animalcules which breed in the human skin; but that it was in a letter from Cestoni to Redi, and published in the works of the latter, that the animal which is imagined to produce the itch was, 'for the first time, observed and described with an accuracy almost equal to that of the modern entomologists.' The insect was said to be of the genus *acarus*; and Cestoni positively asserts that it is the true source of the disease. This letter of Cestoni seems, however, to have fallen into complete oblivion, and to have had little or no influence on the opinions of his successors."[68]

Of course the so called “oblivion” or “little or no influence” was the result of language barriers and poor information dissemination on one hand, and the key mistake “in a letter from Cestoni to Redi”on the other. And the objective of Galès’ study was “to ascertain the real fact, with the respect both to the existence and the nature of the animal and to its power of generating the malady.”[68]



ESSAI

SUR

LE DIAGNOSTIC DE LA GALE,

SUR SES CAUSES,

ET SUR LES CONSÉQUENCES MÉDICALES PRATIQUES A DÉDUIRE SUR LES VRAIES NOTIONS DE CETTE MALADIE;

PAR J. C. GALÉS,

DOCTEUR EN MÉDECINE DE LA FACULTÉ DE PARIS.

Medici quicumque cordati et curiosi naturam ipsam interrogant, et sua hinc petere principia operæ pretium faciunt.

ARISTOT., *de Respiratione*, in fine.

BROCHURE IN-QUARTO AVEC FIGURES.

A PARIS,

CHEZ MÉQUIGNON L'AINÉ, PÈRE, Libraire de la Faculté de Médecine, rue de l'École de Médecine.

DE L'IMPRIMERIE DE DIDOT JEUNE.

1812.

(12)

trouve, pour la première fois, observé et décrit avec une exactitude presque égale à celle des modernes entomologistes. Ces observations sont consignées dans une lettre que ce savant naturaliste a publiée comme lui ayant été adressée par le docteur *Bonomo*, et qui a été depuis réclamée par *Cestoni*, qui en est le véritable auteur. Cette lettre, écrite en italien en 1787, a été traduite en latin par *Lanzoni*, et insérée en 1691 sous cette forme dans le *Miscellanea naturæ curiosorum*. On la trouve en français dans la Collection académique, où l'on y a fondu une autre lettre de *Cestoni* à *Vallisnieri*, écrite en 1710. Voici un extrait de cette pièce:

« Tandis que, guidé par vos vues et sous vos auspices, je faisais « des expériences sur les insectes, je lus par hasard dans le diction- « naire de l'académie *della Crusca* que le ciron est un très-petit ver « qui se forme sous la peau des galeux, et dont la morsure cause une « extrême démangeaison (1); ayant trouvé depuis que *Giuseppe Lo- « renzio* adopte cette opinion (2), j'eus la curiosité de vérifier le fait « par moi-même. Je communiquai ce dessein à M. *Hyacinthe Cestoni*: « il m'assura avoir vu plusieurs fois de pauvres femmes, dont les en- « fans étaient galeux, tirer avec la pointe d'une épingle, des plus « petites pustules, avant qu'elles fussent mûres et purulentes, je ne « sais quoi qu'elles écrasaient sur l'ongle, non sans un petit craque- « ment; et qu'à Livourne les galériens se rendaient réciproquement « le même service. Il ajouta qu'il ne savait pas avec certitude si les « cirons étaient effectivement des vers: ainsi nous résolûmes tous

(1) « Pedicelloeun picolissimo bacolino, il quale si generaa rognosi in pelle, e « rodendo cagiona un acutissimo pizzicore ». (Vocabulario dell'academia della Crusca, 1.re édition.) — Cette définition prouverait que cette notion de la gale était alors très-vulgairement répandue, si l'on ne savait que *Redi* fut l'un des principaux rédacteurs de ce dictionnaire, et que ses ouvrages y sont fréquemment cités.

(2) « Acarus, *Teredo*. Vermiculus exiguus sub cutem rodens. *Pedicello* ». (*Josephi Laurentii Amalthea*; Lugduni, 1664, p. 5.)

For the record - No. 9

Bonomo’s letter to Redi served as the very foundation of the French medical degree thesis by Jean-Chrysanthe Galès, whose work initiated the new interest in the etiology of scabies in Western Europe.

Galès triumphed in his mission, though his glory soon turned into disgrace, because no one else, from Florence to Paris, either the believers or the sceptics, was able to repeat what he claimed: found the itch mite in the vesicles on the itching skin. The controversy was so big that it drew the attention from the watchful eyes across the English Channel: in an article published in the *Lancet* in 1827, there was the following passage:

> “Alibert has carefully examined many scabious patients, and declares he could never find any sarcoptes or acari; and Biett, who is a very careful and reflecting man, Las examined a large number of patients with the person employed by Gales to draw the insects, but they could never discover any in the vesicles under any circumstances. The painter afterwards owned to Biett that he had never seen any one of the insects in the itch vesicles or pustules, but always outside them. Lugot [*sic*] continued these investigations in 1819, 1820, and 1821, with the strongest lens, but with the same result as the preceding. This is strong authority against the *vital itch*, and goes a great way to upset the force of the observations of Gales and the others.”[69]

Even so, Galès’ advisor Alibert never wavered in his belief in either Bonomo’s discovery or his student’s rediscovery. In a book published in 1832, Alibert wrote:

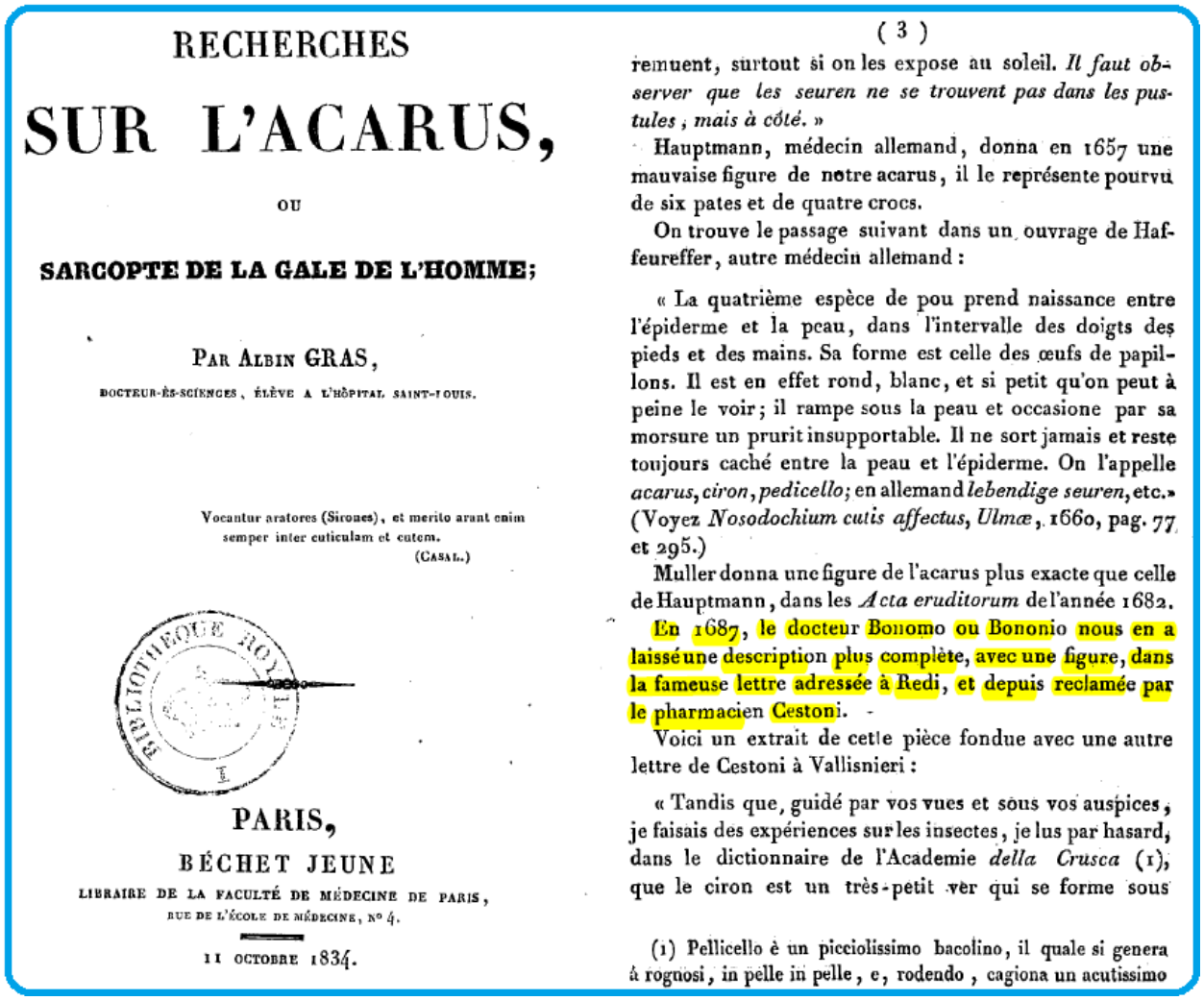
> “C'est Bonomo qui a véritablement découvert des insectes dans les pustules de la gale; et il

> faut, à juste titre, compter cette époque pour en lire la première description positive, où non seulement le genre des insectes est mis hors de doute, mais où ils sont décrits aussi clairement, rendus aussi évidens, et même déja représentés aussi exactement d'après nature qu'on les trouve encore aujourd'hui par le secours des plus forts microscopes. On sait qu'il communiqua ses Observations à Redi, dans une lettre écrite en italien, et publiée à Florence en 1683. (*Osservazioni in torno a pelli celli del corpo umano, dal G. Cos. Bonomo, e da lui con altre osservazioni scritte in una lettera all Fr. Redi*.) On ne saurait donc ranger ces animalcules parmi les êtres fabuleux, tels que les crinons, les furies infernales, etc. Aussi le célèbre Richard Méad donna beaucoup d'importance à cette découverte en Angleterre [1]."[70]

In 1828, Professor Lugol offered 300 francs to the first person who would demonstrate in front of him how to extract the mite from the scabies patients. Six years later, Simon François Renucci, an Italian medical student at the French Hospital St. Louis, accomplished the mission: the story was told vividly and in great detail by the *Lancet*, again. So, what was the key to Renucci's success, or other people's failure? Here it is:

> "According to M. Renucci, the acarus, or itch ciron, is never to be found in the vesicle. It appears, however, that M. Gerdy junior has in two cases extracted the insect from the vesicle, in which situation it has occasionally but very rarely been found by others. In the great majority of cases the acarus is only to be met with in a small epidermic canal, probably excavated by itself, invariably terminated by one of its extremities in the vesicle, either straight or tortuous, and varying in length from one to three lines. The raised epidermis forming the vault of that canal, presents a grayish yellow dull aspect, which is interrupted most generally towards its non-vesicular extremity, by a dull white opaque speck, betraying the position of the insect, and owing the difference of its hue to the same cause. This extra-vesicular position, combined with the minuteness of the insect, partly explains the fruitlessness of past researches."[71]

Right after Renucci's demonstration, Albin Gras, a student at the Hospital St. Louis, conducted a series of self-experiments to demonstrate, successfully, that the mite is the cause of scabies[72]. Not only that, Gras also translated Bonomo's letter to Redi from Latin to French in his paper.



RECHERCHES

SUR L'ACARUS,

OU

SARCOPTE DE LA GALE DE L'HOMME;

PAR ALBIN GRAS,

DOCTEUR-ÈS-SCIENCES, ÉLÈVE A L'HÔPITAL SAINT-LOUIS.

Vocantur aratores (Sirones), et merito arant enim semper inter cuticulam et cutem.
(CASAL.)

PARIS,

BÉCHET JEUNE

LIBRAIRE DE LA FACULTÉ DE MÉDECINE DE PARIS,
RUE DE L'ÉCOLE DE MÉDECINE, N° 4.

11 OCTOBRE 1834.

remuent, surtout si on les expose au soleil. *Il faut observer que les seuren ne se trouvent pas dans les pustules, mais à côté.* »

Hauptmann, médecin allemand, donna en 1657 une mauvaise figure de notre acarus, il le représente pourvu de six pates et de quatre crocs.

On trouve le passage suivant dans un ouvrage de Haffeureffer, autre médecin allemand :

« La quatrième espèce de pou prend naissance entre l'épiderme et la peau, dans l'intervalle des doigts des pieds et des mains. Sa forme est celle des œufs de papillons. Il est en effet rond, blanc, et si petit qu'on peut à peine le voir; il rampe sous la peau et occasione par sa morsure un prurit insupportable. Il ne sort jamais et reste toujours caché entre la peau et l'épiderme. On l'appelle *acarus, ciron, pedicello;* en allemand *lebendige seuren,* etc.» (Voyez *Nosodochium cutis affectus, Ulmæ,* 1660, pag. 77 et 295.)

Muller donna une figure de l'acarus plus exacte que celle de Hauptmann, dans les *Acta eruditorum* de l'année 1682.

En 1687, le docteur Bonomo ou Bononio nous en a laissé une description plus complète, avec une figure, dans la fameuse lettre adressée à Redi, et depuis reclamée par le pharmacien Cestoni.

Voici un extrait de cette pièce fondue avec une autre lettre de Cestoni à Vallisnieri :

« Tandis que, guidé par vos vues et sous vos auspices, je faisais des expériences sur les insectes, je lus par hasard, dans le dictionnaire de l'Academie *della Crusca* (1), que le ciron est un très-petit ver qui se forme sous

(1) Pellicello è un picciolissimo bacolino, il quale si genera à rognosi, in pelle in pelle, e, rodendo, cagiona un acutissimo

For the record - No. 10

In 1834, Bonomo's letter to Redi was translated into French again by Albin Gras in his self-experiment report on scabies.

(4) Conclusions

So, what conclusion could be drawn from the above historical facts?

First of all, it is very clear that the discovery made by Bonomo and Cestoni had never been forgotten, let alone completely forgotten, in the years following its publication in 1687. On the contrary, the discovery had been serving as a candle, or beacon, in the darkness to guide the etiological exploration of the disease by the European researchers in the entire 18th century and the early one third of the 19th century.

Forgotten completely? Nonsense!

Bonomo's letter to Redi was published in 1687 in Florence, Italy. Five years later, the complete letter was translated into Latin by Josepho Lanzono and published by Noribergæ. In 1703, the abridged English translation of the letter, by Richard Mead, was published in *Philosophical Transactions* of the Royal Society of London. In 1786, Johann Ernst Wichmann translated Bonomo's letter into German from Mead's English translation and published it in his book, *Aetiologie der Krätze*. In 1812, Jean-Chrysanthe Galès translated Bonomo's letter into French from the 1692 Latin version and published it in his thesis.

Secondly, the discovery made by Bonomo and Cestoni is a natural extension of human's experience and knowledge in scabies, acquired and accumulated by both the lower class people and the upper professionals. Essentially speaking, every component of their discovery had already been discovered by other people before them. As a French science historian Daniele Ghesquier said:

> "The construction of the scientific concept of the itch is an example of a collective construction of a scientific fact."[73]

Thirdly, the most prominent feather of the discovery made by Bonomo and Cestoni, though, is its completeness, or comprehensiveness, just as Hebra assessed: "the most complete investigations with reference to the *acarus scabiei* and its relation to the itch" in the 17th century[32]. In other

words, the biggest contribution of Bonomo and Cestoni's discovery to medicine and science is that they advanced a plausible working hypothesis or theory that scabies is caused by the infestation of a particular kind of mites in human body.

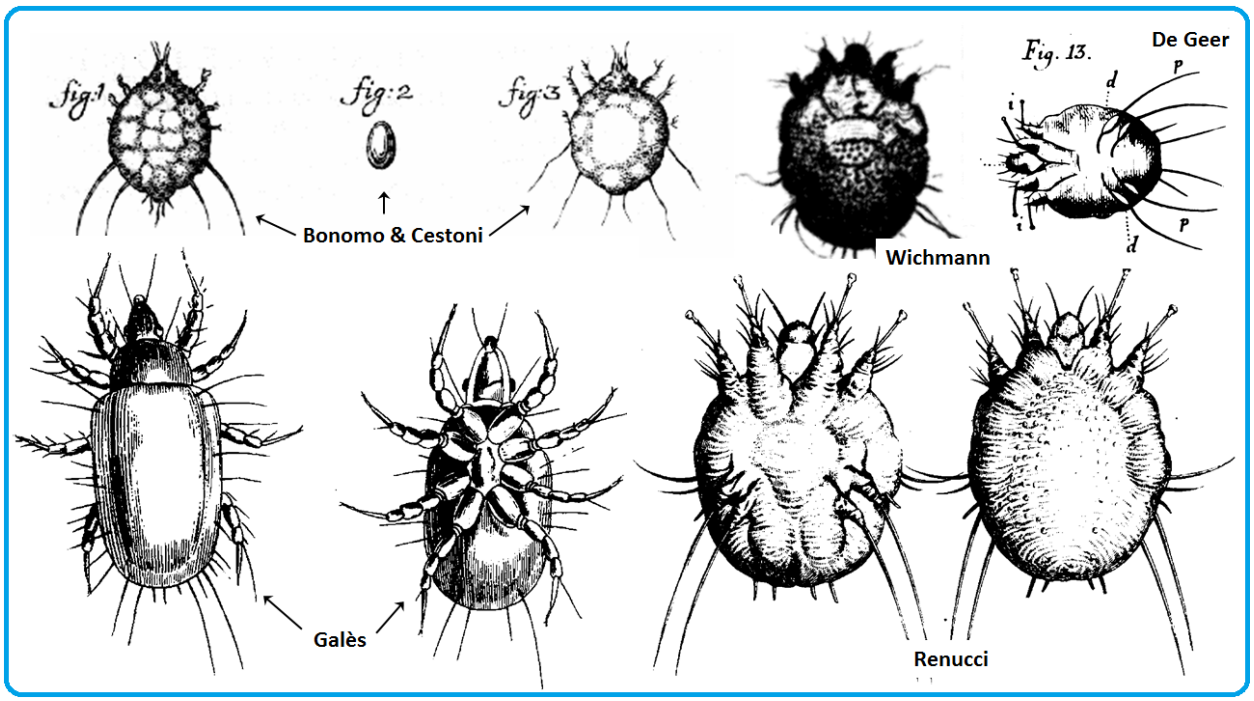
Fourthly, there is absolutely no reason whatsoever to deprive Diacinto Cestoni of his honor as the co-discoverer, and very likely the leading role player, in the discovery.

Finally, the very reason which made the European scientists and physicians reluctant to accept Bonomo and Cestoni's discovery was the discoverers' own fault: no one was able to repeat their result. Bonomo and Cestoni claimed that they found the itch mite in the "pustules," however, according to Renucci's medical degree thesis, "In human itch the *Acarus* is never found in the contents of the vesicles."[21] As Beeson put it:

> "Despite Hebra's eulogy of their work, Bonomo and Cestoni were guilty of several errors : first, in saying that Acarus is present in watery pustules, and second, in confusing the adult and larval forms."[21]

Another person was much harsher:

> "Bonomo (? pseudonym for Cestoni, an apothecary) (1687), who had seen the women of the lower orders in Italy pick out the acarus from its burrow, published a note on the subject. He stated, however, that the parasite was in the vesicles. Moreover, his figures require a good deal of imagination to recognize in them the familiar acarus. This Cestoni (or Bonomo) appears to have been a bit of a quack, but at any rate he is credited with being the first writer to call attention to the parasite as the cause of itch."[50]



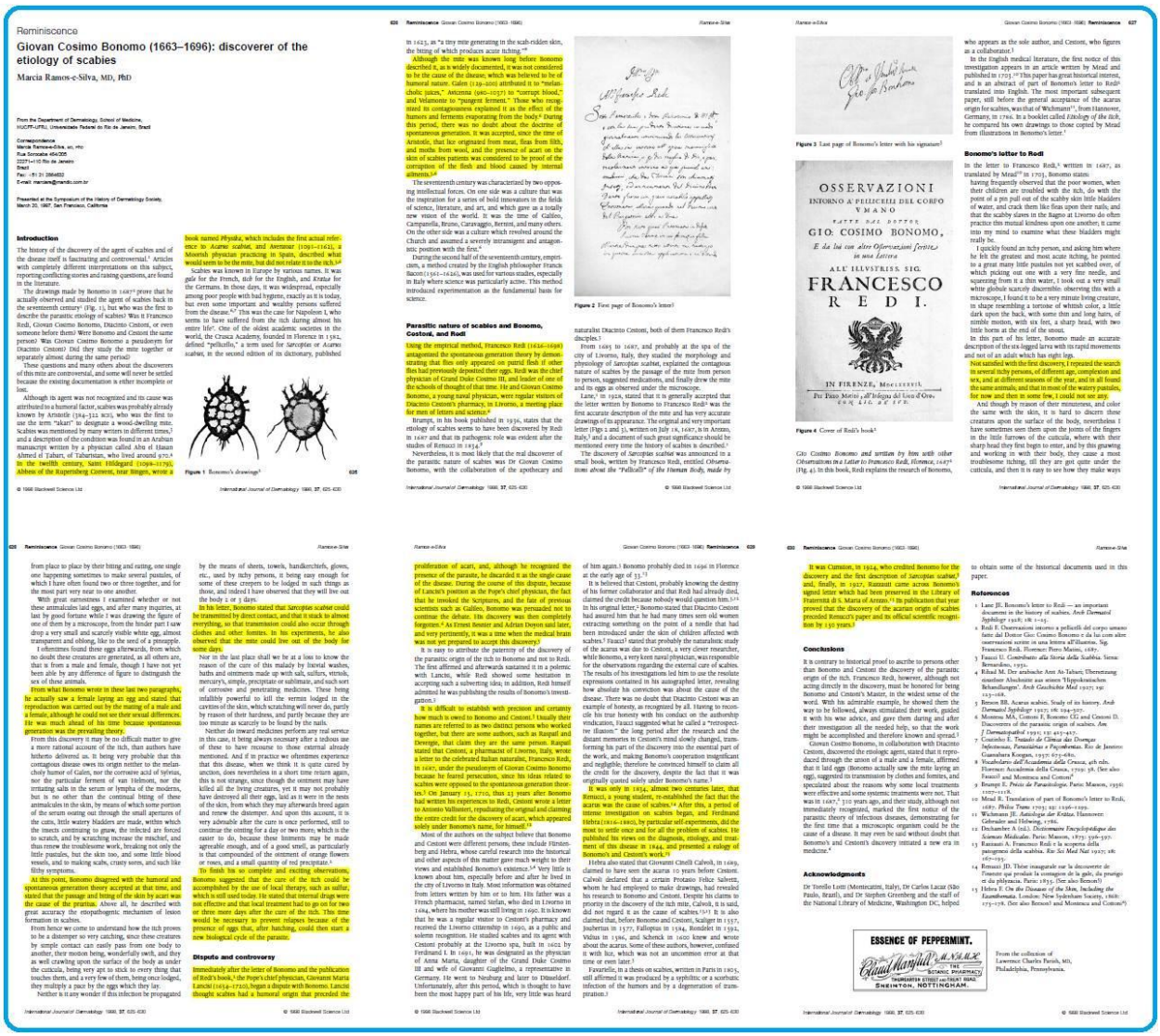
The evolution of the microscopic image of the scabies mite
From left: the scabies mite image illustrated by Bonomo in 1687[27]; by Wichmann in 1786[54]; by Galès in 1812[63], and by Renucci in 1839[21].

So, the question more relevant to us is: How could the John Maddox Prize winner Fang Zhouzi get these historical facts completely wrong?

If you knew him well, you'd have guessed the answer right: the congenital literary thief must have stolen the wrong goods.

The Transcontinental Thievery

In March 1997, Dr. Marcia Ramos-e-Silva, then an associate professor of dermatology at Universidade Federal do Rio de Janeiro, presented a paper at a conference entitled *GIOVAN COSIMO BONOMO (1663-1696): Discoverer of the etiology of scabies*. The presentation was published in the *International Journal of Dermatology* in the next year[74]. Just by looking at the title, it is obvious where Fang's sole attribution to Bonomo came from. And indeed, Fang's entire historical narrative about the scabies etiology discovery was based on Dr. Ramos-e-Silva's paper. The complete comparison is listed in the appended table at the end of this article; however, there are many more interesting stories in the theft.


Reminiscence

Giovan Cosimo Bonomo (1663–1696): discoverer of the etiology of scabies

Marcia Ramos-e-Silva, MD, PhD

OSSERVAZIONI
INTORNO A' PELLICELLI DEL CORPO VMANO
FATTE DAL DOTTOR
GIO. COSIMO BONOMO,
E da lui con altre Osservazioni Scritte
in una Lettera
ALL' ILLVSTRISS. SIG.
FRANCESCO
R E D I.

IN FIRENZE, MDCLXXXVII.

ESSENCE OF PEPPERMINT.

Grand Marnier Pharmacy

Systematic and historic stealing

The above images are Dr. Ramos-e-Silva's paper published in the *International Journal of Dermatology* in 1998 (upper), and Fang's article published in the *Xinhua Daily Telegraph* on Feb. 10, 2012 (lower). The portions highlighted in yellow indicate the similarity in contents between the two articles; the red box in the lower image indicates the paragraph which was stolen by Fang from another already identified source. The person in the upper left corner in the lower image is Mr. Xie Guoji, the editor-in-chief of the *Xinhua Daily Telegraph*, to whom I have informed Fang's plagiarism at least 7 times; the big characters in the brown seal image 賊贓 (zéi zāng), which mean "stolen goods," are added by me.

1. The Italian Connection

It appears that Dr. Ramos-e-Silva's paper was mainly based on two literatures: a paper published in 1991 by Italian scholars Drs. Maria Antonia Montesu and Francesca Cottoni of the Università di Sassari in Italy, *G.C. Bonomo and D. Cestoni. Discoverers of the parasitic origin of scabies*[36], and Dr. Richard Mead's English translation of the original letter from Bonomo to Redi[45]. More specifically, Dr. Ramos-e-Silva incorporated almost the entire content of the both articles into her own paper, with her own annotations. For example, the first paragraph of the Italian paper is:

> "The 17th century was characterized by two opposing cultural trends. One culture, which revolved around the Church, assumed a severely intransigent position vis à vis the second, which was inspired by a series of bold innovators in the fields of science, literature, and art. These cultural explorers gave us nothing less than a new vision of the world. This was the century of Galileo Galilei (1564-1642), Tommaso Campanella (1568-1639), Giordano Bruno (1548-1600), Michelangiolo Merisi detto il Caravaggio (1573-1610), and Gian Lorenzo Bernini (1598-1680) (I)."[36]

And the 7th paragraph of the Brazilian paper is:

> "The seventeenth century was characterized by two opposing intellectual forces. On one side was a culture that was the inspiration for a series of bold innovators in the fields of science, literature, and art, and which gave us a totally new vision of the world. It was the time of Galileo, Campanella, Bruno, Caravaggio, Bernini, and many others. On the other side was a culture which revolved around the Church and assumed a severely intransigent and antagonistic position with the first.6"[74]

Here is the last paragraph of the Italian paper:

> "The discovery by Bonomo and Cestoni, even though not immediately recognized, marked the first mention of the parasitic theory of infectious diseases. They were the first to demonstrate that a disease could be caused by a microscopic organism. Their discovery may fairly be said to have initiated a new era in medicine."[36]

And here is the last paragraph by Dr. Ramos-e-Silva:

> "Giovan Cosimo Bonomo, in collaboration with Diacinto Cestoni, discovered the etiologic agent, stated that it reproduced through the union of a male and a female, affirmed it laid eggs (Bonomo actually saw the mite laying an egg), suggested its transmission by clothes and fomites, and speculated about the reasons some local treatments were effective and some systemic were not. That was in 1687,2 three hundred and 10 years ago; and their study, even though not immediately recognized, marked the first notice of the parasitic theory of infectious diseases; demonstrating for the first time that a microscopic organism could be the cause of a disease. It may even be said without doubt that Bonomo's and Cestoni's discovery initiated a new era in Medicine.[6]"[74]

Admittedly, the end note mark "6" refers the paper by Montesu & Cottoni.

In May 2014, when I found the similarity between the Italian and Brazilian papers, I sent a letter to Dr. Rokea A. el-Azhary, the Editor-in-Chief of the *International Journal of Dermatology*, to alert her with my finding:

> "Although Dr. Marcia Ramos-e-Silva did mention Montesu and Cottoni's paper many times, she didn't acknowledge the fact that she incorporated almost the entire content of the latter's paper into her own, and the fact that she duplicated, frequently, the wordings of the latter's."
>
> "Whether the action by Dr. Marcia Ramos-e-Silva constituted plagiarism is not for me to say, however, I do believe it did. That's why I am bringing the matter to your attention."

Till this day, I have not yet heard a word from the Editor-in-Chief or the journal. Obviously, they believe the writing style is acceptable.

me May 27, 2014

To elazhary.rokea2@mayo.edu

CC osanguez@wakehealth.edu, marciars@mandic.com.br

[redacted]
Columbia, SC [redacted]

May 27, 2014

Dr. Rokea A. el-Azhary
Editor-in-Chief, International Journal of Dermatology
Department of Dermatology
Mayo Clinic
200 First Street SW
Rochester, MN 55905
elazhary.rokea2@mayo.edu

Dear Editor-in-Chief:

In the 8th issue of the volume 37 of the International Journal of Dermatology, published in 1998, there is a paper entitled *GIOVAN COSIMO BONOMO (1663-1696): Discoverer of the etiology of scabies*, authored by Dr. Marcia Ramos-e-Silva of the Universidade Federal do Rio de Janeiro, Brazil. [International Journal of Dermatology 1998;37(8):625-630.] The paper cited a total of 15 references, among them was one by Italian scholars M. A. Montesu and F. Cottoni [*G.C. Bonomo and D. Cestoni. Discoverers of the parasitic origin of scabies*. Am J Dermatopathol 1991;13(4):425-427.] Although Dr. Marcia Ramos-e-Silva did mention Montesu and Cottoni's paper many times, she didn't acknowledge the fact that she incorporated almost the entire content of the latter's paper into her own, and the fact that she duplicated, frequently, the wordings of the latter's. For example, the first paragraph of Montesu and Cottoni's paper is:

> The 17th century was characterized by two opposing cultural trends. One culture, which revolved around the Church, assumed a severely intransigent position vis à vis the second, which was inspired by a series of bold innovators in the fields of science, literature, and art. These cultural explorers gave us nothing less than a new vision of the world. This was the century of Galileo Galilei (1564-1642), Tommaso Campanella (1568-1639), Giordano Bruno (1548-1600), Michelangiolo Merisi detto il Caravaggio (1573-1610), and Gian Lorenzo Bernini (1598-1680) (I).

And the 7th paragraph of Dr. Marcia Ramos-e-Silva's paper is:

> The seventeenth century was characterized by two opposing intellectual forces. On one side was a culture that was the inspiration for a series of bold innovators in the fields of science, literature, and art, and which gave us a totally new vision of the world. It was the time of Galileo, Campanella, Bruno, Caravaggio, Bernini, and many others. On the other side was a culture which revolved around the Church and assumed a severely intransigent and antagonistic position with the first.[6]

I took the liberty of doing a comparison between the two papers and found that the duplication was systemic: barring a few sentences, all the rest of Montesu and Cottoni's paper was present in Dr. Marcia Ramos-e-Silva's paper (please see the attached jpg file).

Whether the action by Dr. Marcia Ramos-e-Silva constituted plagiarism is not for me to say, however, I do believe it did. That's why I am bringing the matter to your attention.

Thanks.

Xin Ge, Ph. D.
[redacted]
Columbia, SC [redacted]
USA

CC:
Dr. Omar P. Sangueza
Editor-in-Chief, *The American Journal of Dermatopathology*
Email: osanguez@wakehealth.edu

Dr. Marcia Ramos-e-Silva
Associate Professor of Dermatology
From the School of Medicine, HUCFF-UFRJ
Universidade Federal do Rio de Janeiro, Brazil
Email: marciars@mandic.com.br

The image below shows the comparison between the two papers. Montesu and Cottoni's paper is listed on the left in its entirety, and the paragraphs resembling the corresponding words or content in Dr. Marcia Ramos-e-Silva paper are listed to their right. For larger image, see the attached file.

2 Attachments | View all | Download all

GIOVAN COSIMO ... .pdf View | Download

Whistleblowing

My email to the editor-in-chief of the *International Journal of Dermatology* has generated no response at all.

Comparison between the papers
by Italian scholars Montesu & Cottoni and Brazilian dermatologist Ramos-e-Silva

Note: The Italian paper, which contains 14 paragraphs, is shown in its entirety on the left side of the table, and the corresponding similar texts in the Brazilian paper, which contains 42 paragraphs, are shown to the right.

Montesu & Cottoni's 1991 paper: *G.C. Bonomo and D. Cestoni. Discoverers of the parasitic origin of scabies*. American Journal of Dermatopathology 13:425-427.		**Ramos-e-Silva's 1998 paper:** *GIOVAN COSIMO BONOMO (1663-1696): Discoverer of the etiology of scabies*. International Journal of Dermatology 37(8):625-630.	
Para.	**Text**	**Para.**	**Text**
I	The 17th century was characterized by two opposing cultural trends. One culture, which revolved around the Church, assumed a severely intransigent position vis à vis the second, which was inspired by a series of bold innovators in the fields of science, literature, and art. These cultural explorers gave us nothing less than a new vision of the world. This was the century of Galileo Galilei (1564-1642), Tommaso Campanella (1568-1639), Giordano Bruno (1548-1600), Michelangiolo Merisi detto il Caravaggio (1573-1610), and Gian Lorenzo Bernini (1598-1680) (1).	**7th**	The seventeenth century was characterized by two opposing intellectual forces. On one side was a culture that was the inspiration for a series of bold innovators in the fields of science, literature, and art, and which gave us a totally new vision of the world. It was the time of Galileo, Campanella, Bruno, Caravaggio, Bernini, and many others. On the other side was a culture which revolved around the Church and assumed a severely intransigent and antagonistic position with the first.[6]
II	Thus, the discovery of the etiology of scabies took place in a period characterized by opposing intellectual forces and by the divorce of science from theology and philosophy. Advances in geography and astronomy, anatomical studies, the discovery of the circulation of the blood, and the invention of the telescope and the microscope all stimulated the group of intellectuals who surrounded the great Galileo, ultimately giving rise to new academies for scientific research (1). In this period of great cultural upheaval in Italy, some of the oldest existing academic societies were founded, such as the Crusca Academy. Established in 1582 in Florence, which compiled the linguistic patrimony of the Italian language into the first dictionary (1612). Meanwhile the Lincei Academy. Established in Rome in 1603, laid the foundation for the new approach to the mathematical and natural sciences.		
III	This environment of intellectual ferment formed the background to the discovery by Giovan Cosimo Bonomo (1663-1696) and Diacinto Cestoni (1637- 1718) of the parasitic nature of scabies, which was first recorded on July 18. 1687 (Figs. 1. 2) (2.3).		
IV	Scabies had been noted since very ancient times. The condition was described in a manuscript of an Arabian physician named Abū I-	**4th**	Although its agent was not recognized and its cause was attributed to a humoral factor, scabies was probably already

	Hasan Ahmad at-Tabarī of Tabaristan, who lived around 970 A.D. (4). At-Tabari not only recognized the presence of the itch mite in scabies lesions, he also realized that the disease could be cured by applying ointments to the skin (external therapy). Aristotle (384-322 B.C.) too has been credited with a knowledge of the *Acarus scabiei.* He was the first to use the word "Akari", although this was not the *Acarus scabiei* but a mite living in wood (5).		known by Aristotle (384–322 BCE), who was the first to use the term ‘‘akari’’ to designate a wood-dwelling mite. Scabies was mentioned by many writers in different times,[3] and a description of the condition was found in an Arabian manuscript written by a physician called Abū el Ḥasan Ạhmed el Ṭabarī, of Tabaristan, who lived around 970.[4]
V	The first actual reference to the *Acarus scabiei* is to be found in a work entitled "Physika" written in the 12th century by Saint Hildegarde (1099-1179), the Lady Superior of the Convent of the Rupertsberg, near Bingen (3). In the same period. Avenzoar (1091-1162), a Moorish physician practicing in Spain, described in a manuscript the probable etiology of scabies.	**4th**	In the twelfth century, Saint Hildegard (1098–1179), Abbess of the Rupertsberg Convent, near Bingen, wrote a book named Physika, which includes the first actual reference to Acarus scabiei, and Avenzoar (1091–1162), a Moorish physician practicing in Spain, described what would seem to be the mite, but did not relate it to the itch.[5,6]
VI	At that time, scabies was widespread throughout Europe, and the name by which the acarus was called varied from country to country. In Germany it was "Suren," in Gascony "brigant," in Turin "siro," in Tuscany and in the Venetian Republic "pellicello." In Italy, the *Acarus scabiei* was recorded in the second edition (1623) of the Crusca Academy dictionary under the name "pellicello." The dictionary defined it as "a tiny mite generating in the scab-ridden skin, the gnawing of which produces acute itching" (6).	**5th**	Scabies was known in Europe by various names. It was gale for the French, itch for the English, and Krätze for the Germans. ……One of the oldest academic societies in the world, the Crusca Academy, founded in Florence in 1582, defined ‘‘pellicello,’’ a term used for Sarcoptes or Acarus scabiei, in the second edition of its dictionary, published in 1623, as ‘‘a tiny mite generating in the scab-ridden skin, the biting of which produces acute itching.’’[8]
VII	Despite the recognition of the acarus in the early 17th century, nobody considered it the cause of scabies, which was believed to be of a humoral nature. Scabies was attributed by different authors to "melancholic juices" (Galenus), "corrupt blood" (Avicenna), or "pungent ferment" (Velamonte); its contagiousness, when recognized, was explained as the effect of the humors and ferments evaporating from the body (2). The presence of acari on the skin of scabies sufferers was, on the contrary, considered as proof of the corruption of the flesh and blood caused by an internal ailment. This notion corresponded to the belief since Aristotle's time that lice originated from meat, fleas from filth, and moths from wool (7).	**6th**	Although the mite was known long before Bonomo described it, as is widely documented, it was not considered to be the cause of the disease; which was believed to be of humoral nature. Galen (129–200) attributed it to ‘‘melancholic juices,’’ Avicenna (980–1037) to ‘‘corrupt blood,’’ and Velamonte to ‘‘pungent ferment.’’ Those who recognized its contagiousness explained it as the effect of the humors and ferments evaporating from the body.[6] During this period, there was no doubt about the doctrine of spontaneous generation. It was accepted, since the time of Aristotle, that lice originated from meat, fleas from filth, and moths from wool, and the presence of acari on the skin of scabies patients was considered to be proof of the corruption of the flesh and blood caused by internal ailments.[3,6]

VIII	At the beginning of the 17th century, the doctrine of spontaneous generation was in no way doubted. Empirical methods were employed in Leonardo's (1452-1519) earlier experiments even before they were codified by Francis Bacon (1561-1626), but it was Galileo Galilei who imposed empiricism on scientific study in the second half of the 17th century (I). The empirical method, which originated in Tuscany, revolutionized the whole of scientific thought, which was particularly active in this part of the world. Francesco Redi (1626-98) applied it to the natural sciences and demonstrated that flies will only reproduce on putrid flesh if other flies have previously deposited their eggs there (8). This discovery dealt the first blow to the "spontaneous generation" doctrine, signalling its end. Redi, physician to the Grand Duke, Cosimo III, headed one of the different schools of thought that flourished during this period. In Leghorn. Diacinto Cestoni's pharmacy became a meeting place for men of letters and science. Among his regular visitors were Redi and a young naval physician named Giovan Cosimo Bonomo (9).	**7th**	The seventeenth century was characterized by two opposing intellectual forces. On one side was a culture that was the inspiration for a series of bold innovators in the fields of science, literature, and art, and which gave us a totally new vision of the world. It was the time of Galileo, Campanella, Bruno, Caravaggio, Bernini, and many others. On the other side was a culture which revolved around the Church and assumed a severely intransigent and antagonistic position with the first.[6]
		8th	During the second half of the seventeenth century, empiricism, a method created by the English philosopher Francis Bacon (1561–1626), was used for various studies, especially in Italy where science was particularly active. This method introduced experimentation as the fundamental basis for science.
		9th	Using the empirical method, Francesco Redi (1626–1698) antagonized the spontaneous generation theory by demonstrating that flies only appeared on putrid flesh if other flies had previously deposited their eggs. Redi was the chief physician of Grand Duke Cosimo III, and leader of one of the schools of thought of that time. He and Giovan Cosimo Bonomo, a young naval physician, were regular visitors of Diacinto Cestoni's pharmacy, in Livorno, a meeting place for men of letters and science.[6]
IX	In Leghorn, Bonomo and Cestoni discovered that the acarus was the exclusive cause of scabies. They studied its morphology and physiology, explained its contagious nature by the passage of the acarus from subject to subject, suggested medications, and finally drew the acarus and its eggs as observed under a microscope (Fig. 3). These studies, which began in 1685, were concluded in July 1687, when Giovan Cosimo Bonomo wrote a letter to Redi describing the etiology of scabies: "I have good reason to conclude that the affliction is nothing but a continuous biting and chewing inflicted upon by 'Bacarelli' of this type ... " (10-12).	**12th**	From 1685 to 1687, and probably at the spa of the city of Livorno, Italy, they studied the morphology and physiology of Sarcoptes scabiei, explained the contagious nature of scabies by the passage of the mite from person to person, suggested medications, and finally drew the mite and its eggs as observed under the microscope.
X	Immediately afterward, a dispute broke out between Bonomo and Giovanni Maria Lancisi (1654-1720). Lancisi, the pope's chief physician, recognized the presence of the acarus but excluded it as the sole cause of scabies. According to Lancisi, scabies had a humoral origin that preceded the proliferation of the acarus. Lancisi availed himself of his authoritative standing and in the	**32nd**	Immediately after the letter of Bonomo and the publication of Redi's book,[2] the Pope's chief physician, Giovanni Maria Lancisi (1654–1720), began a dispute with Bonomo. Lancisi thought scabies had a humoral origin that preceded the proliferation of acari, and, although he recognized the presence of the parasite, he discarded it as the single cause of

	course of the dispute invoked the Scriptures (13.14). Mindful of the fate of Galileo, Bonomo was persuaded not to continue the debate.		the disease. During the course of this dispute, because of Lancisi's position as the Pope's chief physician, the fact that he invoked the Scriptures, and the fate of previous scientists such as Galileo, Bonomo was persuaded not to continue the debate.
XI	Partly because of the difficulty of isolating the acarus, Bonomo's discovery was completely forgotten in the years that followed. But in 1834, a young student named François Simon Renucci, who had learned how to extract the acarus from the poor women of his native Corsica, proved its existence in Paris and reestablished the fact that the acarus was the cause of scabies (3,7).	**32nd**	His discovery was then completely forgotten.[6]
		37th	It was only in 1834, almost two centuries later, that Renucci, a young student, re-established the fact that the acarus was the cause of scabies.[14]
XII	A period of intensive clinical and experimental research on scabies by numerous investigators throughout Europe followed on Renucci's rediscovery of the *Acarus scabiei.* No one, however, did more to settle, once and for all, the various problems of scabies than Ferdinand Hebra (1816-80), who published his views on the diagnosis, etiology, and treatment of this disease in 1844 (15).	**37th**	After this, a period of intense investigation on scabies began, and Ferdinand Hebra (1816–1880), by particular self-experiments, did the most to settle once and for all the problem of scabies. He published his views on the diagnosis, etiology, and treatment of this disease in 1844, and presented a eulogy of Bonomo's and Cestoni's work.[15]
XIII	In 1925, Alberto Rezzauti came across Bonomo's signed letter which had been preserved in the Fraternita de Laici of Arezzo. Its publication that year proved that in fact the discovery of the acarian origin of scabies preceded its official scientific recognition by 150 years.	**40th**	……and, finally, in 1927, Razzauti came across Bonomo's signed letter which had been preserved in the Library of Fraternità di S. Maria of Arezzo.[13] Its publication that year proved that the discovery of the acarian origin of scabies preceded Renucci's paper and its official scientific recognition by 150 years.[3]
XIV	The discovery by Bonomo and Cestoni, even though not immediately recognized, marked the first mention of the parasitic theory of infectious diseases. They were the first to demonstrate that a disease could be caused by a microscopic organism. Their discovery may fairly be said to have initiated a new era in medicine.	**42nd**	……and their study, even though not immediately recognized, marked the first notice of the parasitic theory of infectious diseases; demonstrating for the first time that a microscopic organism could be the cause of a disease. It may even be said without doubt that Bonomo's and Cestoni's discovery initiated a new era in Medicine.[6]

2. Lost in Translation

One cannot help but wonder why did Dr. Ramos-e-Silva change Montesu & Cottoni's plural title word "discoverers" into her own singular "discoverer," and why would she attributed the discovery solely to Giovan Cosimo Bonomo in the title, but to both Giovan Cosimo Bonomo and Diacinto Cestoni in her conclusion. In other words, why did Dr. Marcia Ramos-e-Silva attempt, though failed, to deprive Cestoni of his right to the discovery? The only plausible answer to the question, besides intentionally distinguishing herself from the other medical historians, seems to be the fact that she was misled by the second source of her paper, Dr. Mead's translation of Bonomo's letter to Redi.

According to Mead's translation, Bonomo used the first-person singular pronoun "I" to tell Redi the discovery. For example, the first two paragraphs read:

> "Having frequently observed that the Poor Women when their Children are troubled with the Itch, do with the point of a Pin pull out of the Scabby Skin little Bladders of Water, and crack them like Fleas upon their Nails; and that the Scabby Slaves in the Bagno at Leghorne do often practice this Mutual Kindness upon one another; it came into **my** Mind to examine what these Bladders might really be.
>
> "**I** quickly found an Itchy person, and asking him where he felt the greatest and most acute Itching, he pointed to a great many little Pustules not yet Scabb'd over, of which picking out one with a very fine Needle, and squeezing from it a thin Water, **I** took out a very small white Globule, scarcely discernible: Observing this with a Microscope, **I** found it to be a very minute Living Creature, in shape resembling a Tortoise, of whitish colour, a little dark upon the Back, with some thin and long Hairs, of nimble motion, with six Feet, a sharp Head, with two little Horns at the end of the Snout ; as is represented in Fig, 1 and 3."[45]

Sounds like indeed that Bonomo was the only person who initiated the inquiry and conducted the investigation, right? However, the inaccuracies of the English translation had been pointed out a long time ago. In 1788, an article published in *The London Medical Journal* said:

> "Dr. Mead, by omitting the beginning of Bonomo's letter to Redi, has not fully stated the circumstances that led to the discovery of the insect in question, and has given to Bonomo the credit of observations for which we find Bonomo acknowledging himself indebted to one of his friends, whom he names."[51]

21 years later, Mead's translation was again criticized, by Dr. Joseph Adams:

> "Part of Bonomo's letter is next inserted, by which it appears that Mead has omitted the introductory and by far most important part. For in this Bonomo tells us, that he was first indebted to his dictionary for his knowledge that such an insect existed, and afterwards to his friend, Hyacyntho Cestonio, who assured him that the nurses and galley slaves extracted the insect from their children and each other (*a minutioribms tuberculis, vel, ut vocitant, immaturis.*)"[75]

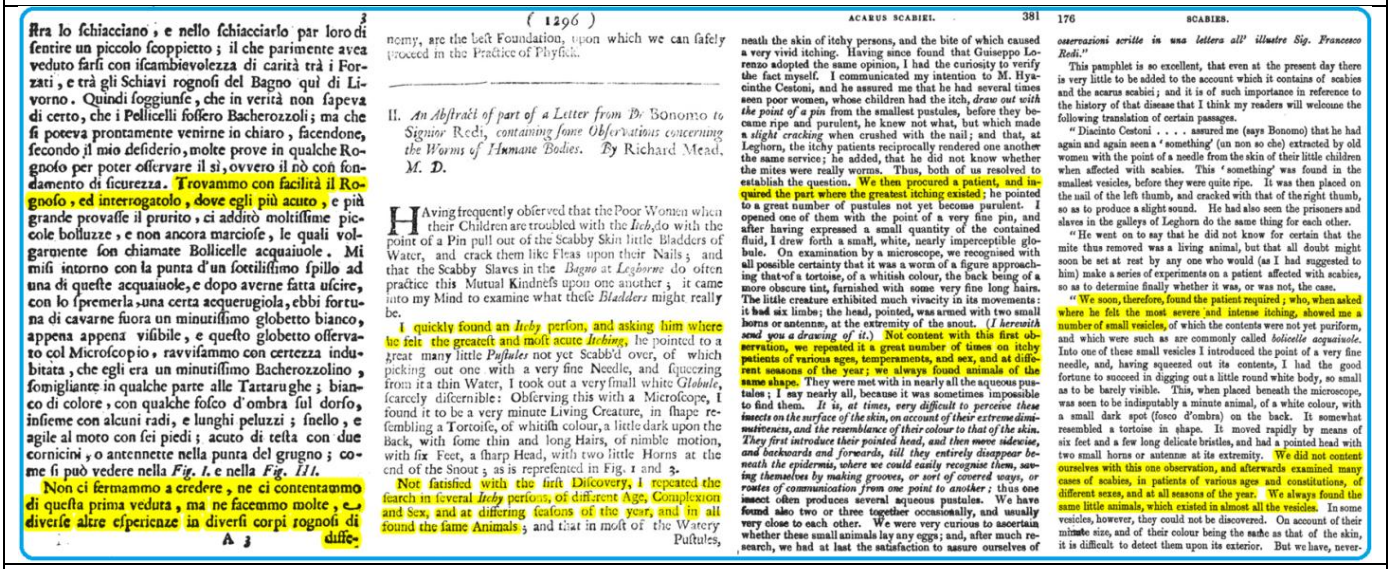
The mistakes in Mead's English translation were pointed out again in 1976, by Professor J. R. Busvine:

> (Mead) "changes from the plural to the first person singular; and he omits to say that the person who actually saw the mite was 'Sig. Isaac Colonello (whom we had engaged to draw the figure)'."[76]

The fact is, in the 1800s, when Bonomo's letter to Redi was translated into French and German, it is very clear that Cestoni's contribution to the discovery was explicitly acknowledged by Bonomo in the letter (see the table and figure below).

Singular or plural? That's the question!
Comparison among the different translations of Bonomo's letter to Redi

Sources	Paragraph I	Paragraph II
Italian original text	**Trovammo** con facilità il Rognoso, ed interrogatolo, dove egli più acuto, e più grande provasse il prurito	Non ci **fermammo** a credere, ne ci contentammo di questa prima veduta, ma ne facemmo molte, e diverse altre esperienze in diversi corpi rognosi di differente età, e complessione, di differente sesso, ed in differenti stagioni dell'anno, e sempre **riconoscemmo** la stessa figura de' Pellicelli,
Wiktionary	trovammo: *first-person plural* past historic of *trovare* (to find).	fermammo: *first-person plural* past historic of *fermare* (to stop). riconoscemmo: *first-person plural* past historic of *riconoscere* (to recognize).
Mead's English translation[45]	**I** quickly found an itchy person, and asking him where he felt the greatest and most acute itching	Not satisfied with the first discovery, **I** repeated the search in several itchy persons, of different age, complexion and sex, and at differing seasons of the year, and in all found the same animals.
Rayer's French translation's English translation[77]	**We** then procured a patient, and inquired the part where the greatest itching existed,	Not content with this first observation, **we** repeated it a great number of times on itchy patients of various ages, temperaments, and sex, and at different seasons of the year; **we** always found animals of the same shape.
Hebra's German translation's English translation[78]	**We** soon, therefore, found the patient required; who, when asked where he felt the most severe and intense itching	**We** did not content ourselves with this one observation, and afterwards examined many cases of scabies, in patients of various ages and constitutions, of different sexes, and at all seasons of the year. **We** always found the same little animals, which existed in almost all the vesicles.



fra lo schiacciano, e nello schiacciarlo par loro di sentire un piccolo scoppietto; il che parimente avea veduto farsi con iscambievolezza di carità trà i Forzati, e trà gli Schiavi rognosi del Bagno quì di Livorno. Quindi soggiunse, che in verità non sapeva di certo, che i Pellicelli fossero Bacherozzoli; ma che si poteva prontamente venirne in chiaro, facendone, secondo il mio desiderio, molte prove in qualche Rognoso per poter osservare il sì, ovvero il nò con fondamento di sicurezza. Trovammo con facilità il Rognoso, ed interrogatolo, dove egli più acuto, e più grande provasse il prurito, ci additò moltissime piccole bolluzze, e non ancora marcíose, le quali volgarmente son chiamate Bollicelle acquaiuole. Mi misi intorno con la punta d'un sottilissimo spillo ad una di queste acquaiuole, e dopo averne fatta uscire, con lo spremerla, una certa acquerugiola, ebbi fortuna di cavarne fuora un minutissimo globetto bianco, appena appena visibile, e questo globetto osservato col Microscopio, ravvisammo con certezza indubitata, che egli era un minutissimo Bacherozzolino, somigliante in qualche parte alle Tartarughe; bianco di colore, con qualche fosco d'ombra sul dorso, insieme con alcuni radi, e lunghi peluzzi; snello, e agile al moto con sei piedi; acuto di testa con due cornicini, o antennette nella punta del grugno; come si può vedere nella *Fig. I.* e nella *Fig. III.*

Non ci fermammo a credere, ne ci contentammo di questa prima veduta, ma ne facemmo molte, e diverse altre esperienze in diversi corpi rognosi di

A 3 diffe-

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nomy, are the beſt Foundation, upon which we can ſafely proceed in the Practice of Phyſick.

II. *An Abſtract of part of a Letter from Dr* Bonomo *to Signior* Redi, *containing ſome Obſervations concerning the Worms of Humane Bodies.* By Richard Mead, *M. D.*

HAving frequently obſerved that the Poor Women when their Children are troubled with the *Itch*, do with the point of a Pin pull out of the Scabby Skin little Bladders of Water, and crack them like Fleas upon their Nails; and that the Scabby Slaves in the *Bagno* at *Leghorne* do often practice this Mutual Kindneſs upon one another; it came into my Mind to examine what theſe *Bladders* might really be.

I quickly found an *Itchy* perſon, and asking him where he felt the greateſt and moſt acute *Itching*, he pointed to a great many little *Puſtules* not yet Scabb'd over, of which picking out one with a very fine Needle, and ſqueezing from it a thin Water, I took out a very ſmall white *Globule*, ſcarcely diſcernible: Obſerving this with a Microſcope, I found it to be a very minute Living Creature, in ſhape reſembling a Tortoiſe, of whitiſh colour, a little dark upon the Back, with ſome thin and long Hairs, of nimble motion, with ſix Feet, a ſharp Head, with two little Horns at the end of the Snout; as is reprefented in Fig. 1 and 3.

Not ſatisfied with the firſt Diſcovery, I repeated the ſearch in ſeveral *Itchy* perſons, of different Age, Complexion and Sex, and at differing ſeaſons of the year, and in all found the ſame Animals; and that in moſt of the Watery Puſtules,

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neath the skin of itchy persons, and the bite of which caused a very vivid itching. Having since found that Guiseppo Lorenzo adopted the same opinion, I had the curiosity to verify the fact myself. I communicated my intention to M. Hyacinthe Cestoni, and he assured me that he had several times seen poor women, whose children had the itch, *draw out with the point of a pin* from the smallest pustules, before they became ripe and purulent, he knew not what, but which made a *slight cracking* when crushed with the nail; and that, at Leghorn, the itchy patients reciprocally rendered one another the same service; he added, that he did not know whether the mites were really worms. Thus, both of us resolved to establish the question. We then procured a patient, and inquired the part where the greatest itching existed; he pointed to a great number of pustules not yet become purulent. I opened one of them with the point of a very fine pin, and after having expressed a small quantity of the contained fluid, I drew forth a small, white, nearly imperceptible globule. On examination by a microscope, we recognised with all possible certainty that it was a worm of a figure approaching that of a tortoise, of a whitish colour, the back being of a more obscure tint, furnished with some very fine long hairs. The little creature exhibited much vivacity in its movements: it had six limbs; the head, pointed, was armed with two small horns or antennæ, at the extremity of the snout. (*I herewith send you a drawing of it.*) Not content with this first observation, we repeated it a great number of times on itchy patients of various ages, temperaments, and sex, and at different seasons of the year; we always found animals of the same shape. They were met with in nearly all the aqueous pustules; I say nearly all, because it was sometimes impossible to find them. *It is, at times, very difficult to perceive these insects on the surface of the skin, on account of their extreme diminutiveness, and the resemblance of their colour to that of the skin. They first introduce their pointed head, and then move sidewise, and backwards and forwards, till they entirely disappear beneath the epidermis, where we could easily recognise them, saving themselves by making grooves, or sort of covered ways, or routes of communication from one point to another;* thus one insect often produces several aqueous pustules. We have found also two or three together occasionally, and usually very close to each other. We were very curious to ascertain whether these small animals lay any eggs; and, after much research, we had at last the satisfaction to assure ourselves of

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osservazioni scritte in una lettera all' illustre Sig. Francesco Redi."

This pamphlet is so excellent, that even at the present day there is very little to be added to the account which it contains of scabies and the acarus scabiei; and it is of such importance in reference to the history of that disease that I think my readers will welcome the following translation of certain passages.

"Diacinto Cestoni . . . . assured me (says Bonomo) that he had again and again seen a 'something' (un non so che) extracted by old women with the point of a needle from the skin of their little children when affected with scabies. This 'something' was found in the smallest vesicles, before they were quite ripe. It was then placed on the nail of the left thumb, and cracked with that of the right thumb, so as to produce a slight sound. He had also seen the prisoners and slaves in the galleys of Leghorn do the same thing for each other.

"He went on to say that he did not know for certain that the mite thus removed was a living animal, but that all doubt might soon be set at rest by any one who would (as I had suggested to him) make a series of experiments on a patient affected with scabies, so as to determine finally whether it was, or was not, the case.

"We soon, therefore, found the patient required; who, when asked where he felt the most severe and intense itching, showed me a number of small vesicles, of which the contents were not yet puriform, and which were such as are commonly called *bolicelle acquaiuole*. Into one of these small vesicles I introduced the point of a very fine needle, and, having squeezed out its contents, I had the good fortune to succeed in digging out a little round white body, so small as to be barely visible. This, when placed beneath the microscope, was seen to be indisputably a minute animal, of a white colour, with a small dark spot (fosco d'ombra) on the back. It somewhat resembled a tortoise in shape. It moved rapidly by means of six feet and a few long delicate bristles, and had a pointed head with two small horns or autennæ at its extremity. We did not content ourselves with this one observation, and afterwards examined many cases of scabies, in patients of various ages and constitutions, of different sexes, and at all seasons of the year. We always found the same little animals, which existed in almost all the vesicles. In some vesicles, however, they could not be discovered. On account of their minute size, and of their colour being the same as that of the skin, it is difficult to detect them upon its exterior. But we have, never-

A quadruple comparison

From left: The original Italian letter from Bonomo to Redi is compared with its 1703 English translation by Richard Mead; the 1833 English translation of its French translation by Rayer; and the 1868 English translation of its German translation by Hebra. The portions highlighted in yellow show the key differences in the first-person singular and plural pronouns.

Apparently, Fang's statement that "Bonomo has been considered in the medical history the first person who ever identified the pathogen of a disease," was based on the misled Brazilian dermatologist.

3. The Believers of Conflict Thesis

According to a century-old theory, science and religion are fundamentally incompatible, and the relationship between the two forces has been hostile and conflicting, hence the name "conflict thesis"[79]. Although the theory has been refuted and falsified extensively and exhaustively with historical facts in the circles of philosophy and history of science, there are still some people who, for some reason, want to believe in it.

According to Dr. Marcia Ramos-e-Silva, the reason for Bonomo's discovery being forgotten was the suppression by the religious force which believed in the theory of spontaneous generation:

> "Immediately after the letter of Bonomo and publication of Redi's book,[2] the Pope's chief physician, Giovanni Maria Lancisi (1654-1720) began a dispute with Bonomo. Lancisi thought scabies had a humoral origin that preceded the proliferation of the acarus, and, although he recognized the presence of the parasite, he discarded it as the single cause of the disease. In the course of this dispute, because of Lancisi's position as the Pope's chief physician, the fact that he invoked the Scriptures, and the fate of previous scientists as Galileo; Bonomo was persuaded not to continue the debate. His discovery was then completely forgotten.[6]"[74]

Again, the end note 6 refers the paper by Montesu & Cottoni. However, Dr. Ramos-e-Silva not only paraphrased the latter's words, she twisted them as well. Here is what was written by the Italians:

> "Immediately afterward, a dispute broke out between Bonomo and Giovanni Maria Lancisi (1654-1720). Lancisi, the pope's chief physician, recognized the presence of the acarus but excluded it as the sole cause of scabies. According to Lancisi, scabies had a humoral origin that preceded the proliferation of the acarus. Lancisi availed himself of his authoritative standing and in the course of the dispute invoked the Scriptures (13.14). Mindful of the fate of Galileo, Bonomo was persuaded not to continue the debate.
>
> "**Partly because of the difficulty of isolating the acarus**, Bonomo's discovery was completely forgotten in the years that followed."[36]

In other words, Dr. Ramos-e-Silva, apparently on purpose, made the separated paragraphs, and stories, in Montesu & Cottoni's paper, into an integral and consequential story, by deleting the key adverbial phrase "Partly because of the difficulty of isolating the acarus."

Immediately afterward, a dispute broke out between Bonomo and Giovanni Maria Lancisi (1654–1720). Lancisi, the pope's chief physician, recognized the presence of the acarus but excluded it as the sole cause of scabies. According to Lancisi, scabies had a humoral origin that preceded the proliferation of the acarus. Lancisi availed himself of his authoritative standing and in the course of the dispute invoked the Scriptures (13,14). Mindful of the fate of Galileo, Bonomo was persuaded not to continue the debate.

Partly because of the difficulty of isolating the acarus, Bonomo's discovery was completely forgotten in the years that followed. But in 1834, a young student named François Simon Renucci, who had learned how to extract the acarus from the poor women of his native Corsica, proved its existence in Paris and reestablished the fact that the acarus was the cause of scabies (3,7).

Immediately after the letter of Bonomo and the publication of Redi's book,[2] the Pope's chief physician, Giovanni Maria Lancisi (1654–1720), began a dispute with Bonomo. Lancisi thought scabies had a humoral origin that preceded the proliferation of acari, and, although he recognized the presence of the parasite, he discarded it as the single cause of the disease. During the course of this dispute, because of Lancisi's position as the Pope's chief physician, the fact that he invoked the Scriptures, and the fate of previous scientists such as Galileo, Bonomo was persuaded not to continue the debate. His discovery was then completely forgotten.[6] As Ernest Besnier and Adrian Doyon said later, and very pertinently, it was a time when the medical brain was not yet prepared to accept this discovery.[5]

Condensation with a purpose

Apparently believing the outdated "conflict thesis," Dr. Ramos-e-Silva deleted the key words "Partly because of the difficulty of isolating the acarus" in Montesu & Cottoni's paper (left) to write her own words by paraphrasing the latter's other words. By doing so, Dr. Ramos-e-Silva successfully transferred the blame for the delayed recognition of Bonomo and Cestoni's discovery from their own fault to the Catholic Church.

The Brazilian version of the story was retold by the Chinese scifool writer Fang, an ardent believer in the conflict theory, faithfully:

> "Redi published Bonomo's letter as a booklet, which immediately caused dispute. The major opponent was the Pope's chief physician Lancisi. Although Lancisi recognized the presence of the scabies bug, but he didn't believe the bug was the cause of scabies, and he, based on literature, pointed out that body juice factor was the cause of scabies. Since the Pope's chief physician had spoken, and he also invoked the Bible as his base (scabies was mentioned in Old Testament Leviticus), to avoid the religious persecution suffered by Bruno and Galileo, Bonomo stopped the debate.
>
> "23 years later, in 1710, both Bonomo and Redi had passed away, Cestoni mentioned the discovery of scabies bugs, but he attributed the discovery to himself, didn't mention Bonomo, therefore some people suspected that Bonomo was Cestoni's pseudonym used to avoid the religious persecution.
>
> "From that time on, the discovery was not mentioned by any other people and forgotten."

Obviously, neither the Brazilian dermatologist nor the Chinese scifool writer knew the content of the debate between Bonomo and Lancisi when they wrote their stories. As a matter of fact, the "biomedical expert" Fang even didn't know that Lancisi's name had already been translated by China's medical professionals into 兰奇西 (lán qí xī)[80], which sounds very similar to Lancisi's Italian pronunciation, so he translated Lancisi into 兰西西 (lán xī xī), obviously based on his limited knowledge in English phonetics.

The fact is, Giovanni Maria Lancisi (1654-1720) was an extremely intelligent and successful anatomist, cardiologist, epidemiologist, urologist, and even a veterinarian[81]. The so called "Lancisi sign"[82] and "longitudinal striae of Lancisi"[83] were named after him. He was the first person who noticed the relationship between swamp and malaria, and he postulated, correctly, that mosquitoes

might be responsible for the transmission of the disease[81, 84]. In addition, Lancisi played an important role in stopping the spread of cattle plague in Europe in the 18th century[85].

So, exactly what did Lancisi do to prevent one of the biggest discoveries of the age by his fellow countrymen from being known to the world?

Based on the information available to me[28, 86], it seems that in the entire duration of the controversy, Lancisi was rather patient, polite, and professional, and I see no sign of him trying to force his idea upon Bonomo with his position or the power of the Church. On the contrary, it was Bonomo, or more exactly the person behind him, Cestoni, who was rather aggressive - Cestoni couldn't hold his anger even 26 years later[87]. Briefly, Lancisi believed that every effect has multiple causes, therefore it is unlikely the mite would be responsible for all the "pellicello," an Italian term for scabies, and like the latter, it was sometimes used to refer all kind of skin itching diseases. Further, Lancisi pointed out the fact that Bonomo failed to find the mite in all the vesicles. Finally, Lancisi believed that the experience acquired by a few persons could not be used to overthrow the knowledge and experience accumulated for many centuries.

To some extent, Lancisi's arguments are still valid today. As mentioned above, according to Koch's postulates, to identify a pathogen, one has to complete 4 steps: find the agent in all the diseased patients; isolate the agent and prepare its pure culture; inoculate the agent on healthy hosts to produce the same disease; isolate the agent again from the new patients. Etiologically, Bonomo and Cestoni's investigation hardly completed the first step, they even didn't demonstrate that killing the mite could cure scabies, or the cured patients were free of the mite. Therefore, to a person with professional medical training, their assertion was at most a hypothesis waiting for proof. No wonder the theory was not even accepted by their compatriots[88], and even Francesco Redi, the very person who smashed the spontaneous generation theory and published Bonomo's letter to himself, seemed to have his reservation[89]. As a matter of fact, even a century after the discovery, some people were still refusing to accept Bonomo and Cestoni's conclusion with a valid argument:

> "Although I will not deny that worms really exist in the pustules of the itch, yet their presence is no proof that they are to be regarded as its cause. It is quite as probable that they are in some way or other generated by the disease; for we find worms in ulcers and wounds, and yet no one would assert that these worms give rise to the ulcers."[90]

So, what about "the Scriptures" invoked by Lancisi during the debate? Well, in a letter he sent to Bonomo, Lancisi, besides citing other medical writers, cited many legends or stories, such as Egyptians believed that eating long lentil could get mange and lepra; Seneca people believed that certain water and drinks could make people itchy, so did the Bible prohibit the chosen people from eating pork[86]. Considering the fact that the Bible was cited together with many local and folk traditions, it is extremely overreaching to say that Lancisi was trying to silence Bonomo with the authority of the Church. The funny thing is, Fang, apparently not knowing which part of the Bible, and in what context, was invoked by Lancisi, wrote the following sentence in his article: "scabies was mentioned in Old Testament Leviticus." Obviously, Fang didn't know the fact the term scabies only exists in certain English versions of the Bible, in the others, it has been replaced by sore, plaque, and scall[91].

4. The Worshipers of Ferdinand Hebra

In Fang's article, there are more jokes which also serve as the ironclad evidences for Fang's stealing from Dr. Ramos-e-Silva. Here is a paragraph written by Fang:

> "From that time on, the discovery was not mentioned by any other people and forgotten. Physicians would still believe that scabies was caused by humoral factor. It was till 1834, when a student named Renucci re-discovered that the scabies bug is the cause of scabies, which aroused the interested in the medical community. In 1844, Hebra, **by self-experiments**, elaborated the etiology, symptom, and treatment of the disease, which settled once and for all the problem of scabies. **Hebra also made a eulogy** of Bonomo and Cestoni's original research, and their names were written into history because of that. Bonomo has been considered in the medical history the first person who ever identified the pathogen of a disease, and by that time, **more than 150 years** had passed since his great discovery."

Please pay attention to the phrases and the sentence highlighted in bold.

(1) Confusion by Insertion

Fang's above paragraph was apparently based on the following two paragraphs by Dr. Ramos-e-Silva:

> "It was only in 1834, almost two centuries later, that Renucci, a young student, re-established the fact that the acarus was the cause of scabies.[14] After this, a period of intense investigation on scabies began, and Ferdinand Hebra (1816–1880), by particular self-experiments, did the most to settle once and for all the problem of scabies. He published his views on the diagnosis, etiology, and treatment of this disease in 1844, and presented a eulogy of Bonomo's and Cestoni's work.[15]"[74]

> "……and, finally in 1927, Razzauti came across Bonomo's signed letter which had been preserved in the Library of Fraternità di S. Maria of Arezzo.[14] Its publication that year proved that, in fact, the discovery of the acarian origin of scabies preceded Renucci's paper and its official scientific recognition by 150 years.[3]"[74]

Although Dr. Ramos-e-Silva cited 3 references in the above two paragraphs, it is very likely that her writing was primarily based on the following 3 paragraphs by Montesu & Cottoni:

> "……But in 1834, a young student named François Simon Renucci, who had learned how to extract the acarus from the poor women of his native Corsica, proved its existence in Paris and reestablished the fact that the acarus was the cause of scabies (3,7).

> "A period of intensive clinical and experimental research on scabies by numerous investigators throughout Europe followed on Renucci's rediscovery of the *Acarus scabiei.* No one, however, did more to settle, once and for all, the various problems of scabies than Ferdinand Hebra (1816-80), who published his views on the diagnosis, etiology, and treatment of this disease in 1844 (15).

> "In 1925, Alberto Rezzauti came across Bonomo's signed letter which had been preserved in the Fraternita de Laici of Arezzo. Its publication that year proved that in fact the discovery of the acarian origin of scabies preceded its official scientific recognition by 150 years."[36]

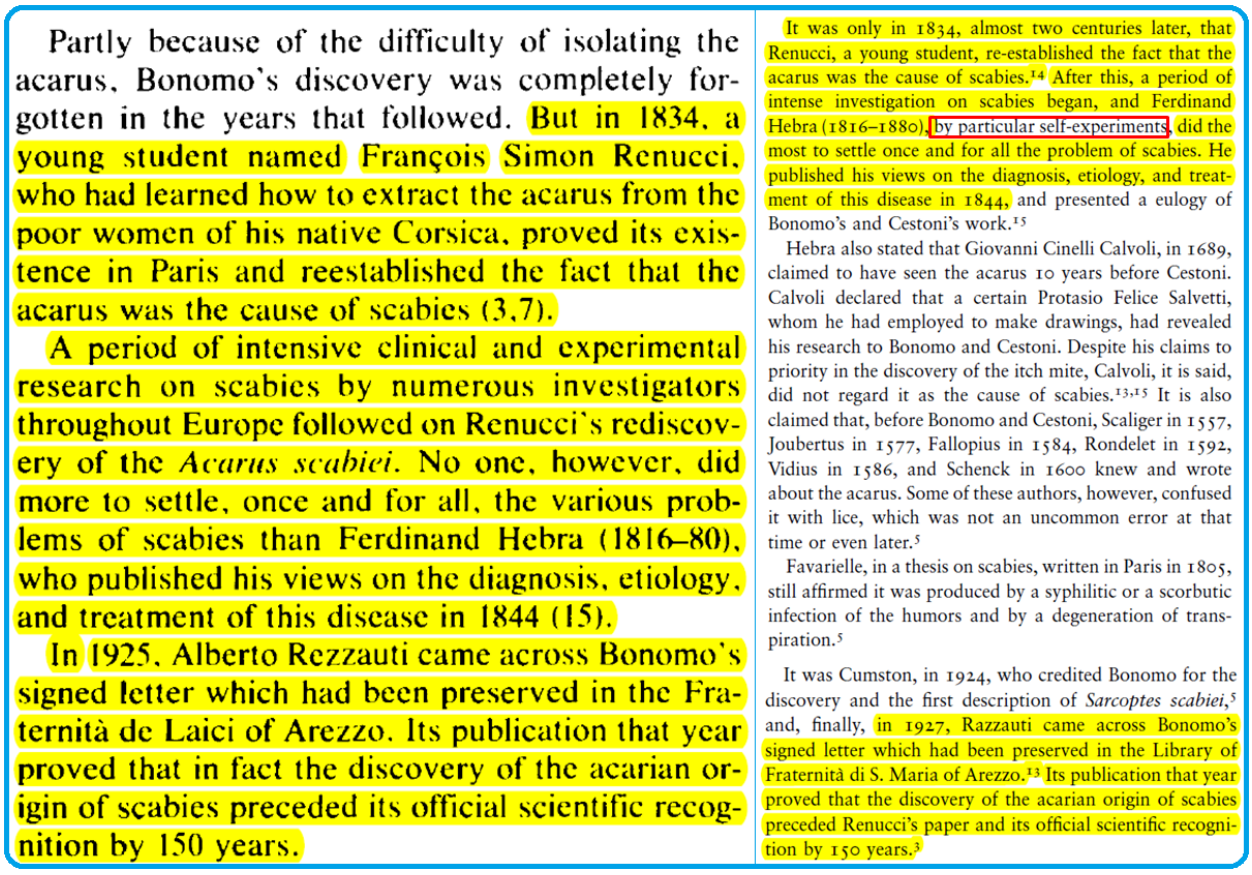
The problem is, when Dr. Ramos-e-Silva paraphrased these 3 paragraphs into her two paragraphs, she inserted two more paragraphs, consisting of a total of 173 words, in between, all seemed to be from Beeson's review:

> "Hebra also stated that Giovanni Cinelli Calvoli, in 1689, claimed to have seen the acarus 10

years before Cestoni. Calvoli declared that a certain Protasio Felice Salvetti, whom he had employed to make drawings, had revealed his research to Bonomo and Cestoni. Despite his claims to priority in the discovery of the itch mite, Calvoli, it is said, did not regard it as the cause of scabies.[13,15] It is also claimed that, before Bonomo and Cestoni, Scaliger in 1557, Joubertus in 1577, Fallopius in 1584, Rondelet in 1592, Vidius in 1586, and Schenck in 1600 knew and wrote about the acarus. Some of these authors, however, confused it with lice, which was not an uncommon error at that time or even later.[5]

"Favarielle, in a thesis on scabies, written in Paris in 1805, still affirmed it was produced by a syphilitic or a scorbutic infection of the humors and by a degeneration of transpiration.[5]

"It was Cumston, in 1924, who credited Bonomo for the discovery and the first description of Sarcoptes scabiei,[5]……"[74]



Partly because of the difficulty of isolating the acarus, Bonomo's discovery was completely forgotten in the years that followed. But in 1834, a young student named François Simon Renucci, who had learned how to extract the acarus from the poor women of his native Corsica, proved its existence in Paris and reestablished the fact that the acarus was the cause of scabies (3,7).

A period of intensive clinical and experimental research on scabies by numerous investigators throughout Europe followed on Renucci's rediscovery of the *Acarus scabiei*. No one, however, did more to settle, once and for all, the various problems of scabies than Ferdinand Hebra (1816–80), who published his views on the diagnosis, etiology, and treatment of this disease in 1844 (15).

In 1925, Alberto Rezzauti came across Bonomo's signed letter which had been preserved in the Fraternità de Laici of Arezzo. Its publication that year proved that in fact the discovery of the acarian origin of scabies preceded its official scientific recognition by 150 years.

It was only in 1834, almost two centuries later, that Renucci, a young student, re-established the fact that the acarus was the cause of scabies.[14] After this, a period of intense investigation on scabies began, and Ferdinand Hebra (1816–1880), by particular self-experiments, did the most to settle once and for all the problem of scabies. He published his views on the diagnosis, etiology, and treatment of this disease in 1844, and presented a eulogy of Bonomo's and Cestoni's work.[15]

Hebra also stated that Giovanni Cinelli Calvoli, in 1689, claimed to have seen the acarus 10 years before Cestoni. Calvoli declared that a certain Protasio Felice Salvetti, whom he had employed to make drawings, had revealed his research to Bonomo and Cestoni. Despite his claims to priority in the discovery of the itch mite, Calvoli, it is said, did not regard it as the cause of scabies.[13,15] It is also claimed that, before Bonomo and Cestoni, Scaliger in 1557, Joubertus in 1577, Fallopius in 1584, Rondelet in 1592, Vidius in 1586, and Schenck in 1600 knew and wrote about the acarus. Some of these authors, however, confused it with lice, which was not an uncommon error at that time or even later.[5]

Favarielle, in a thesis on scabies, written in Paris in 1805, still affirmed it was produced by a syphilitic or a scorbutic infection of the humors and by a degeneration of transpiration.[5]

It was Cumston, in 1924, who credited Bonomo for the discovery and the first description of *Sarcoptes scabiei*,[5] and, finally, in 1927, Razzauti came across Bonomo's signed letter which had been preserved in the Library of Fraternità di S. Maria of Arezzo.[13] Its publication that year proved that the discovery of the acarian origin of scabies preceded Renucci's paper and its official scientific recognition by 150 years.[3]

Expansion with a purpose

The 3 consecutive paragraphs in Montesu & Cottoni's paper (left) were adopted by Dr. Ramos-e-Silva to write 128 words which were distributed in 2 paragraphs (right, highlighted in yellow); however, Dr. Ramos-e-Silva inserted 173 words, all were apparently adopted from Beeson, in between.

Apparently being confused by Dr. Ramos-e-Silva's insertion, which changed the context of Montesu & Cottoni's paper dramatically, Fang must think that it was in 1844 and by Hebra that Bonomo's discovery was "rediscovered," so he, who is extremely proud of his elementary arithmetic knowledge, changed Dr. Ramos-e-Silva's "the discovery of the acarian origin of scabies preceded Renucci's paper and its official scientific recognition by 150 years" to his own "Bonomo has been considered in the medical history the first person who ever identified the pathogen of a disease, and by that time, **more than 150 years** had passed since his great discovery." Obviously not certain about his own judgment, Fang used the vague phrase "more than 150 years" instead of giving an

exact number, 157 years. How calculating! Unfortunately, Fang's calculation was based on a wrong assumption.

The technique of adaptation:
Turning other people's writing into your own without the risk of being charged with plagiarism
The entire paragraphs #38 and #39, plus a part of #40, in Dr. Ramos-e-Silva's paper appear to be based on the review written by Dr. B. Barker Beeson, published in 1927.

Ramos-e-Silva[74]	**B. Barker Beeson**[21]
Hebra also stated that Giovanni Cinelli Calvoli, in 1689, claimed to have seen the acarus 10 years before Cestoni. Calvoli declared that a certain Protasio Felice Salvetti, whom he had employed to make drawings, had revealed his research to Bonomo and Cestoni. Despite his claims to priority in the discovery of the itch mite, Calvoli, it is said, did not regard it as the cause of scabies.[13,15] *13 Razzauti A. Francesco Redi e la scoperta della patogenesi della scabbia. Riv Sci Med Nat 1927; 18:167–195.* *15 Hebra F. On the Diseases of the Skin, Including the Exanthemata. London: New Sydenham Society, 1868: 175–178. (See also Beeson[5] and Montescu and Cottoni[6])*	Hebra states that in 1689, Giovanni Cinelli Calvoli claimed to have seen Acarus ten years before Cestoni. Calvoli declared that a certain Protasio Felice Salvetti, whom he had employed to make drawings, had revealed his researches to Bonomo and Cestoni. Despite his claims to priority in the discovery of the itch mite, Calvoli, it is said, did not regard it as the cause of scabies.
It is also claimed that, before Bonomo and Cestoni, Scaliger in 1557, Joubertus in 1577, Fallopius in 1584, Rondelet in 1592, Vidius in 1586, and Schenck in 1600 knew and wrote about the acarus. Some of these authors, however, confused it with lice, which was not an uncommon error at that time or even later.[5] *5 Beeson BB. Acarus scabiei. Study of its history. Arch Dermatol Syphilogr 1927; 16: 294–307.*	According to some, Julius Caesar Scaliger, in his work "De subtilitate," published at Paris in 1557, showed a good knowledge of the itch mite, referring to its living under the skin and describing its burrow. Others say that he really referred to the crab louse. Laurentius Joubertus (1577) was not only familiar with the mite, but also knew how to extract it. Fallopius (1584), Rondelet (1592) and Vidus Vidius (1586) also knew of Acarus, but the last two confused it with Pediculi, not an uncommon error then or even later. Fürstenberg has claimed that John Schenck, whose "Collection of Medical Observations" was published in 1600, was the first author to show that the Germans were familiar with the itch mite and knew of its extraction.
Favarielle, in a thesis on scabies, written in Paris in 1805, still affirmed it was produced by a syphilitic or a scorbutic infection of the humors and by a degeneration of transpiration.[5]	This reaction went so far that Favarielle, in a Paris thesis on scabies in 1805, affirmed that it was produced by a syphilitic infection or a scorbutic infection of the humors and by a degeneration of the transpiration.
It was Cumston, in 1924, who credited Bonomo for the discovery and the first description of Sarcoptes scabiei,[5]……	Cumston,[27] in 1924, credited Bonomo with discovering and first describing Acarus scabiei. 27. Cumston, Charles Greene: Some Remarks on the History of the Discovery of the Acarus Scabiei, Brit. J. Dermat. 36:13, 1924.

(2) Hebra's Tide-turning Eulogy

According to Dr. Ramos-e-Silva, in his 1844 paper, Hebra "presented a eulogy of Bonomo's and Cestoni's work." Since Dr. Ramos-e-Silva also claims that Bonomo's "discovery was completely forgotten" after his debate with Lancisi, Hebra's eulogy must constitute the re-discovery of Bonomo's work. And it must be based on such an understanding that Fang asserted that Bonomo had been forgotten for "more than 150 years."

As I have demonstrated above, Bonomo's discovery had never been forgotten: from the very beginning of its publication in 1687, it served as the guidance and inspiration for every major breakthrough in the etiological studies on scabies: from German Johann Ernst Wichmann to English Joseph Adams to French Jean-Chrysanthe Galès. So, even though Dr. Hebra indeed eulogized Bonomo and Cestoni in 1844, what kind of difference would it have made? On the other hand, the paper, entitled either "*Ueber die Krätze*"[92], or "*Über Diagnose, Aetiologie und Therapie der Krätze*"[24], depending on to whom you listen, was published in an obscure journal "*Medizinische Jahrbücher*" and in German, and it seems that there are few people in the world who have ever read it – I myself tried to retrieve the paper via the Interlibrary loan system, but failed. What's even more bizarre is that Dr. Ramos-e-Silva cited 15 references, but she didn't list this important one on her reference list. That being said, Dr. Hebra's eulogy of Bonomo and Cestoni in the 1860s had indeed consolidated their status, mainly because of Hebra's own status in the dermatology community.

The question is: where did Dr. Ramos-e-Silva get her idea which misled her Chinese disciple Fang? A plausible answer to the question is in the next paragraph she paraphrased from Beeson:

> "It was Cumston, in 1924, who credited Bonomo for the discovery and first description of Sarcoptes scabiei,[5]……"[74]

Here is what Beeson wrote:

> "Cumston,[27] in 1924, credited Bonomo with discovering and first describing *Acarus scabiei*. In his opinion, Alibert and his eminent opponents would have avoided twenty-two years of labor and discussion had they known the history of cutaneous pathology."[21]

Since Bonomo and Cestoni were completely forgotten before Hebra made his eulogy in 1844, and it took another 80 years for another person to recognize their discovery, then Hebra's eulogy must be of the paramount importance.

Of course, the presumption on which the entire argument was based is false. Charles Greene Cumston, a Swiss "Lecturer on the History of Medicine and Medical Philosophy in the University of Geneva," and the "President-elect Vth International Congress of the History of Medicine," must have not read Galès' thesis, therefore he made a wrong assumption that the French group didn't know the Italian discovery. As mentioned above, Galès translated the entire letter of Bonomo's from Latin to French, and the purpose of his research was to make sure whether the theory proposed by the Italian was right.

Dr. Cumston's ignorance in entomology in general, and in itch mite in particular, was crudely ridiculed by Dr. George Pernet, a "Consulting Dermatologist and late Lecturer on Dermatology in the Post-Graduate Medical College":

> "In his 'Remarks on the History of the Discovery of the *Acarus scabiei*' (Brit. Journ. of Dermatology, 1924, p. 13), Dr. Cumston, of Geneva, states that the description of the parasite by Galès (1812) was 'very exact, since he had counted six pairs of legs and distinguished the male from the female.' Now six pairs of legs would make a total of twelve legs, which is absurd, as Euclid would have said, for every dermatologist knows that the adult Acarus never exhibits more than four pairs of legs—that is, eight legs in all.
>
> "Dr. Cumston then quotes old Richard Mead, who described six legs. This would apply to the larval stage before the creature developed into a small female-like nymph; and later into adult males and females with eight legs. Strictly speaking the acarus is an arachnid, not an insect."[50]

Therefore, it is really absurd for anyone to cite Cumston's paper to demonstrate anything - except for that the discovery by Bonomo and Cestoni was "completely forgotten for about 150 years," which, of course, is a false statement, and it does need the supports from false evidences.

(3) Hebra's Particular "Self-experiments"

When Dr. Ramos-e-Silva praised Ferdinand Hebra by saying that he "did the most to settle once and for all the problem of scabies" "by particular self-experiments" introduced in a paper published in 1844, along with his "eulogy of Bonomo's and Cestoni's work," she gave the following references:

> "15 Hebra F. On the Diseases of the Skin, Including the Exanthemata. London: New Sydenham Society, 1868: 175–178. (See also Beeson[5] and Montescu and Cottoni[6])"[74]

The problem is, none of these cited references had said that Hebra performed self-experiments. Of course, "Montescu" and Cottoni didn't say that (see the quoted paragraphs above), neither did Beeson, nor did Hebra himself. Here is what Beeson wrote:

> "Hebra contributed an accurate article on the itch and its parasite in 1844. He described the gallery in detail, and concluded that if there was no Acarus, there was no itch. He maintained that the disorder was transmitted by the scratching of the patient, thus opening up the burrows and transferring the mites on the finger-nails, either to another person or to a different portion of his own body."[21]

In the second volume of his monumental *On Diseases of the Skin*, its English translation was published in 1868, Hebra did repeatedly mention his paper published in 1844, he even reiterated what he did back then: by using different ways of treatment, he demonstrated that scabies is a local infection, even though the itching is systemic[93]; however, he never said that he had conducted "self-experiments," which, according to my, as well as Fang's, understanding, means using himself as an experimental material, such as a host for inoculation. The only possible source of Dr. Ramos-e-Silva's statement seems to be the following paragraph in Hebra's book:

> "Unfortunately, however, I have not as yet been able to discover, along the numerous substances with which I have myself experimented, or in any of those recommended by other writers, a remedy which completely satisfies these conditions. I must, therefore, content myself with enumerating the medicinal agents and plans of treatment which approach most nearly to what is required."[94]

Obviously, in the paragraph, Dr. Hebra was the subject, rather than an object, of the experiments.

On the other hand, the so called "self-experiments" had been conducted many times before 1844: in 1791, German Wichmann described that two of his friends inoculated the itch mite on themselves[95]. As already mentioned above, in 1801, English physician Joseph Adams inoculated himself with the mite[52]. Also as mentioned already, French Albin Gras conducted self-experiment in 1834[72]. Therefore, had Hebra indeed conducted "self-experiments," their "particularity" must be very limited, God knows how could these "self-experiments……settle once and for all the problem of scabies."

(4) Hebra's Ultimate "Settlement"

Dr. Ramos-e-Silva's statement that Ferdinand Hebra "did the most to settle once and for all the problem of scabies" was indeed based on what was said by Montesu and Cottoni:

> "No one, however, did more to settle, once and for all, the various problems of scabies than Ferdinand Hebra (1816-80), who published his views on the diagnosis, etiology, and treatment of this disease in 1844 (15)."[36]

The reference #15 is Hebra's book published in 1868. However, it seems to me that Dr. Hebra didn't say anything remotely like that. As a matter of fact, he stated explicitly that many progresses had been made by himself and other people after 1844:

> "My own views with reference to the diagnosis, etiology, and treatment of scabies were first published in the year 1844.[1] Since that time I have repeatedly had occasion to write upon this subject, and I would especially direct the attention of my readers to a paper which appeared in 1852,[2] and in which I first made known in Germany the existence of a peculiar form of the disease, termed by me the 'Scabies Norvegica (Norwegische Krätze).'
>
> "Soon afterwards the accuracy of my statements was confirmed, from their own observations, by several writers (Fuchs, of Gottingen, Bamberger, of Wiirzburg, and, lastly, Gumpert, of Wiirzburg, and Kohn, of Bonn); and the writers last named collected together the scattered notices of this affection which had then been published and laid them before the profession in a separate work.
>
> "Most valuable papers on scabies have also been recently published by Reinhardt, Lanquetin, Leydig, and Rudolph Bergh (of Copenhagen). To the writer last named must be especially attributed the credit of having shown that the male acarus is present in much larger numbers than had been supposed. Karl Seggel also, and M. H. F. Fürstenberg, have lately written on the subject of scabies. The work of Fürstenberg upon the acarus may, indeed, be said to be unique. One does not know which to admire more, the comprehensiveness and solidity of the observations contained in it, or the indefatigable industry and fidelity of the author."[97]

As a matter of fact, Hebra complained that as late as 1863, Marie-Guillaume-Alphonse Devergie (1798-1879), a prominent dermatology professor at the University of Paris, still believed that "scabies may be a spontaneous disease."[98] So much for "settling, once and for all, the various problems of scabies" in 1844!

On the other hand, I have failed to find such lavish eulogy of Hebra on his scabies research by his contemporaries and the nearest generations. For example, in a book about scabies, *Krätze und Räude* by Andreas Christian Gerlach, published in 1857 in Berlin, Hebra's name was only connected to the discovery of the Norwegian scabies[99]. Similarly, Sir Erasmus Wilson (1809-1884) never mentioned Hebra's name in his *On Diseases of the Skin* published in 1847; and in the later editions, he did mention Hebra's name, however, these mentioning were not about what Hebra did "to settle once and for all the problem of scabies," but rather about his work on the identification of the Norwegian scabies and the treatment of the common scabies[100]. Also, in Dr. Henry Weightman Stelwagon's *Treatise on Diseases of the Skin*[101], Hebra's name was mentioned about 50 times, but none of them were connected to his research on scabies.

Nonetheless, the following statement, made by Dr. Moriz Kaposi, Hebra's colleague at the Vienna University, somewhat resembles the statement by Montesu and Cottoni, as well as the one by Ramos-e-Silva:

> "But Hebra's classical work (1844), '*Ueber Diagnose, Aetiologie und Therapie der Krätze*,' finally placed the subject on the solid foundation of clinical and experimental facts."[24]

I do believe that the assessment is more accurate and objective, and I don't think "finally placed the subject on the solid foundation of clinical and experimental facts" equals to "did the most to settle once and for all the problem of scabies."

I have also found the following passages in a review published in 1920 in *Parasitology*:

> "This was the condition of things when in 1843 Bourguignon, who was at the Veterinary College at Alfort under Prof. Delafond, undertook his admirable study of human scabies. He handed in his *Trailé entomologique* in 1846, but it was not published till 1852. Meanwhile Hebra was at work in Vienna, and Eichstedt in Germany. Bourguignon does not seem to have known of Eichstedt's work, which included a remarkably fine study of the galleries of *Sarcoptes*, the arrangement of the eggs in them, the phenomena of moulting etc., but he had some acquaintance with Hebra's investigations, and questions of priority arose in 1845 between Hebra and Bourguignon. Of this period also is the work by Gurlt and Hertwig on human scabies (1844).
>
> "……Gerlach published his *Krätze und Räude* in 1857; Furstenberg his *Kräitzmilben der Menschen und Thiere* in 1861; and Delafond and Bourguignon their *Traité pratique* in 1862.
>
> "The fine works of Bourguignon, Gerlach and Furstenberg are generally regarded as the classical publications on this subject, and deserve a special notice. They present a remarkable variety of style and outlook."[102]

Conclusions

Fang Zhouzi's anti-Han Han article *A Dispute Caused by a Parasite* was almost completely translated, without any attribution, from the paper by Brazilian dermatologist Dr. Ramos-e-Silva. Besides systematic similarities, Fang duplicated in his article several key mistakes or dubious assertions made by Dr. Ramos-e-Silva, which serve as the ironclad evidence for his stealing, as Fang said in 1999:

> "The U.S. court convicts plagiarism using ironclad evidences: the original author's technical mistakes, such as citation errors, typos, are made by plagiarists. So some publishers leave some small errors on purpose in their publications for the evidence to accuse other people's plagiarism."[103]

Although Dr. Ramos-e-Silva's mistakes are not technical, they are, at least some of them, unique. In addition, Fang, who had neither training nor knowledge in the history of science or medicine, has a decades-long plagiarist history, which could also be used as the indirect evidence for his stealing in the court of law. As a matter of fact, minutes after Fang posted his article on Weibo, people began to accuse him of plagiarism, simply based on his "reputation" as China's most celebrated plagiarist:

> "Where did you plagiarize this article?"[104]
>
> "Is this article by Fang Zhouzi a plagiarism also? There is not a single note and citation whatsoever."[105]
>
> "You have plagiarized again. When will you clarify your own problems? For your own

interest, you even don't care about your wife, sickening."[106]

"Just plagiarized another article?"[107]

"It's plagiarism!!!!"[108]

"Faint, even in a plagiarized article [you] could not forget about Han Han."[109]

"Is it a plagiarism, Fang Zhouzi?"[110]

Eight months ago, when I started studying the Hanly War, I found the above evidence and reported my finding to *Xinhua Daily Telegraph*[111], the very newspaper which published the stolen article. However, like my other 7 complaint reports sent to them[112], not only has it been ignored by the newspaper completely, it has been invisible to Fang Zhouzi too. Apparently, to some media and institutions, plagiarism is tolerable or acceptable, and the John Maddox Prize winner Fang simply lives on stealing.

The fact is, what Fang has been doing in China is much worse than stealing: by semi-selective and semi-blind stealing, Fang uses public platforms to advance his personal and evil agenda, such as attacking his personal enemies and promoting the interests of his sponsors, in the name of science popularization and fraud fighting, which does nothing but destroy the reputation of science and the creditability of other people's authentic anti-fraud efforts. Ironically, Fang's evildoings have been hailed and acclaimed by some leading science media in the West, such as *Science* magazine and journal *Nature*, which does make us wonder:

Appendix: Fang's *A Dispute Caused by a Parasite* and his sources of stealing

Fang's *A Dispute Caused by a Parasite* and his sources of stealing Note: the complete article by Fang is retrieved from xinhuanet.com/mrdx, listed and translated in its entirety. The text in the Sources column is from the online version of Ramos-e-Silva's *GIOVAN COSIMO BONOMO (1663-1696): Discoverer of the etiology of scabies*, unless otherwise noted.		
Fang's article		**Sources**
Original Chinese	**The English translation**	
近日由于对署名韩寒的作品是否别人代笔的争议，一种有传染性的皮肤病传遍了微博和网上论坛。韩寒在1999 年提交首届新概念作文大赛的文章之一《求医》据称是根据他当时在学校被传染上疥疮，到医院看病的经历写成，但是许多医生看了这篇文章之后，一致认为根据文中对疾病症状的描述，写的不是疥疮。疥疮是由于疥虫寄生在人体引起的，疥虫钻入皮肤，在皮肤中间穿行打隧道、产卵，引起过敏反应，导致皮疹、瘙痒。疥疮的瘙痒局限于手、腕、腹部、阴部等特定部位，痒处会有皮损，包括皮疹、小水疱或结痂。所以要指出哪里痒，是很容易的，而不是像文中所述无法向医生指出痒在何处，而一痒起来又是全身无处不痒。《求医》描述的是其他因素(例如肝炎)引起的皮肤瘙痒。	In recent days, because of the controversy about whether Han Han's articles were ghostwritten, an infectious skin disease became well-known on Weibo and forums on the internet. It is said that one of the essays Han Han submitted to the inaugural New Concept Writing Competition, *Seeing a Doctor*, was based on his personal experience with seeing a doctor for the treatment of the scabies he got in his school. However, after reading the essay, many physicians unanimously believe that the symptom described in the essay is not scabies. Scabies is caused by scabies bug which parasitizes in human body, the scabies bug drills into the skin, making tunnels while walking inside, and laying eggs, which induces allergic reactions, resulting in skin rash and itching. The itching caused by scabies is limited to special areas such as hands, wrists, abdomen, genitals, and there will be skin damages in the itching areas, including rashes, small blisters, or scabs. Therefore, it is very easy to pinpoint where the itching is located, rather than like what was described in the essay that the patient was unable to tell his doctor where the itching was, and once the itching started, it occurred everywhere. The skin itch described in *Seeing a Doctor* is caused by other factors, such as hepatitis.	
疥疮这种病当然是古已有之，中外古代医学文献都有记载。但是古人并不知道它是由寄生虫引起的，而认为是身体自身因素导致的。中国传统医学认为疥疮是由皮肤受风邪热气所致，而西方传统医学则认为疥疮是因为体液失衡、血液败坏或体液发酵导致。古代西方医生有的已认识到这是一种传染病，但也认为是由于患者体液或发酵的蒸发物传染所致。	Of course the scabies disease has existed since the ancient time, which was recorded in the medical literatures at all times and in all lands. However, the ancient people didn't know the disease is caused by a parasite, they thought it was induced by the body's own factors. Traditional Chinese medicine believed that scabies was caused by pathogenic wind and heat, and the western traditional medicine believed that scabies was induced by the imbalanced body juices, corrupted, or pungent ferment. Some ancient western physicians realized that scabies is contagious; however, they also	Although its agent was not recognized and its cause was attributed to a humoral factor, scabies was probably already known by Aristotle (384–322 BCE), …… Galen (129–200) attributed it to "melancholic juices," Avicenna (980–1037) to "corrupt blood," and Velamonte to "pungent ferment." Those who recognized its contagiousness explained it

	believed the contagiousness was the effect of the humors and ferments evaporating from the body.	as the effect of the humors and ferments evaporating from the body.[6]
疥虫非常小，体长不到 1 毫米，肉眼几乎看不到，但是某些细致的古代医生还是能在疥疮患者的水疱里看到细小的虫子。但是他们并没有顺理成章地推测这些小虫子就是疥疮的病因，反而认为是先生了疥疮，再从腐烂的皮肤生出虫子。	The scabies bug is very small, its body length is less than 1 millimeter, hardly visible with naked eyes, but some careful ancient physicians were still able to see the tiny bug in the blisters of the scabies patients. However, these physicians didn't conjecture naturally that the tiny bug is the causing agent of the disease; rather, they thought the bug was generated from the corrupted flesh caused by the scabies.	In the twelfth century, Saint Hildegard (1098–1179), Abbess of the Rupertsberg Convent, near Bingen, wrote a book named *Physika*, which includes the first actual reference to *Acarus scabiei*, and Avenzoar (1091–1162), a Moorish physician practicing in Spain, described what would seem to be the mite, but did not relate it to the itch.[5,6] Although the mite was known long before Bonomo described it, as is widely documented, it was not considered to be the cause of the disease; which was believed to be of humoral nature.
这是因为在古代人们普遍相信虫子这种小生物是从腐败的东西自然而然生出来的，也就是所谓自发发生说。例如，腐烂的肉会变出苍蝇和蛆，朽木会自己长出，汗会生出虱子，海底的烂泥会生出鱼，地里的烂泥会生出青蛙和老鼠……	The reason for that is because the ancient people believed that the small organisms like insects were generated from rotten matters naturally, which is so called spontaneous generation theory. For example, flies and maggots were generated from rotten meat, moths were generated from dead wood, lice from sweat, fish from the slush on the sea floor, and the frogs and mice from the mud in the land……	During this period, there was no doubt about the doctrine of spontaneous generation. It was accepted, since the time of Aristotle, that lice originated from meat, fleas from filth, and moths from wool, and the presence of acari on the skin of scabies patients was considered to be proof of the corruption of the flesh and blood caused by internal ailments.[3,6]
不仅一般人这么想，科学家也这么认为。17 世纪西方某位化学家就这么指导人们怎么造出老鼠：把汗湿透了的内衣和麦子一起放到罐中，不加盖放三七二十一天，等汗发酵了，恶臭渗透进了麦子，麦子就会变成老鼠！到了 1668 年，意大利医生雷第才开始想到要做个实验看看肉是否能自发变成蛆。他的实验很简单，把肉放在开口的罐子里，过一段时间就会长出蛆，要是把罐口用纱布罩上，外面的苍蝇没法进去产卵，肉再怎么烂也长不出蛆来。	It was not only believed by the general public, but also by scientists. In the 17th century, a western chemist instructed other people how to make mice: mix a piece of underwear soaked with sweat and wheat together, left uncovered for 21 days, when the sweat fermented, and the stench permeated the wheat, then the wheat became mice! It was not until 1668 when Italian physician Redi began to think that an experiment was needed to see whether the meat could generate maggots spontaneously. His experiment was very simple: if the meat was left in an uncovered jar, the maggots would arise spontaneously; however, if the jar was covered by cheesecloth, no maggots would appear no matter how putrid the meat became.	The last great proponent, as experimentation began to transform science, was Jan Baptist van Helmont (1580–1644). ……His notes also describe a recipe for mice (a piece of soiled cloth plus wheat for 21 days) and scorpions (basil, placed between two bricks and left in sunlight). His notes suggest he may even have done these things. Francisco Redi (c1626-1697) demonstrated in 1668 that maggots did not, contrary to Aristotle, arise spontaneously, but from eggs laid by adult flies. Meat covered so that the flies could not reach it was free of maggots, while meat that flies could reach developed them. 【Note: the two paragraphs are from Dr. John S. Wilkins' article "*Spontaneous Generation and the Origin of Life*," originally published online in 2004, and was stolen by Fang to write his article "*Major Controversy in science: Could Life Originate Spontaneously?*" published in *Economic Observer* on August 31, Sept. 14, and Sept. 21, 2009. The current version of Dr. John S. Wilkins' article has been modified since the plagiarism was discovered in 2011[113].】 Using the empirical method, Francesco Redi (1626–1698) antagonized the spontaneous generation theory by demonstrating that flies only appeared on putrid flesh if other

		flies had previously deposited their eggs.
雷第的实验首次挑战了自发发生说。受他的影响，医生博诺莫和药剂师塞斯托尼从一个新的角度研究疥疮的病因。1687 年，博诺莫写信向雷第报告他在塞斯托尼的帮助下做出的发现。博诺莫从几名疥疮患者的患处剥下皮肤，用显微镜观察，看到了疥虫。更重要的是，有一次他还在显微镜下看到了有一只母疥虫正在产卵，由此知道了疥虫卵是什么样子，之后就经常在疥疮病人身上发现虫卵。那么结论就很显然了，疥虫不是从腐败的皮肤自发生出的，而是从虫卵生出的，而且经由雌雄交配才会产卵，虽然博诺莫承认，他没法分辨疥虫的性别。	Redi's experiment challenged the spontaneous generation theory for the first time. Influenced by him, physician Bonomo and pharmacist Cestoni studied the cause of scabies from a new angle. In 1687, Bonomo wrote a letter to Redi reporting the discovery he made with the help of Cestoni. Bonomo peeled off the skins from the infected areas in several scabies patients, and then he watched them under a microscope, and he found the scabies bugs. What even more important was, he had observed under the microscope a female scabies bug was laying an egg, therefore he knew what a scabies egg looked like, and since then, he had often found the eggs on the scabies patients. So, the conclusion was very obvious: the scabies bugs were not generated spontaneously from the corrupted skin, but rather from the eggs, and the eggs were only produced by mating of male and female, although Bonomo admitted that he could not differentiate the sex of the scabies bugs.	Redi was the chief physician of Grand Duke Cosimo III, and leader of one of the schools of thought of that time. He and Giovan Cosimo Bonomo, a young naval physician, were regular visitors of Diacinto Cestoni's pharmacy, in Livorno, a meeting place for men of letters and science.[6] "Not satisfied with the first discovery, I repeated the search in several itchy persons, of different age, complexion and sex, and at different seasons of the year, and in all found the same animals; and that in most of the watery pustules, for now and then in some few, I could not see any." From what Bonomo wrote in these two last paragraphs he actually saw a female laying an egg and stated that reproduction was carried out by the mating of a male and a female, although he could not see their sexual differences. He was much ahead of his time because spontaneous generation was the prevailing theory.
博诺莫进而指出，此前关于疥疮是由于体液腐败、发酵等因素导致的说法是错误的，而是由于寄生虫入侵皮肤引起疥疮。博诺莫还注意到，疥虫很容易附着在床单、毛巾、手套等物体上，而且能在体外生存两、三天，由此又推测疥疮是通过疥虫传染的。最后，博诺莫建议疥疮要用外涂硫黄等药物的方法治疗，而且要涂上两、三天才能保证把新从虫卵生出的疥虫也都杀死。至于口服药物，博诺莫认为没有效果。	Bonomo further pointed out that the previous theories about scabies, such as humoral corruption and fermentation, were wrong; the scabies was caused by the infection of skin by parasites. Bonomo also noticed that the scabies bugs were very easy to stick to objects such as bed sheets, towels, and gloves; and they could live out of body for 2 or 3 days. Based on these discoveries, Bonomo conjectured that the scabies was transmitted by scabies bugs. Finally, Bonomo suggested that scabies could be treated by the use of local application of sulphur and other drugs, and the drug should be applied for 2 to 3 days so that the new born bugs from the eggs would be killed. Bonomo believed that internal drugs were not effective.	At this point Bonomo disagreed with the humoral and spontaneous generation theory accepted at that time and stated that the passage and biting of the skin by the acarus was the cause of the pruritus. In his letter Bonomo stated that *Sarcoptes scabiei* could be transmitted by direct contact, and that it sticked to almost everything, so transmission also occur through clothes and other fomites. In his experiments he also observed that the mite could live out of the body for some days. To finish his so complete and exciting observations Bonomo suggested that the cure of the itch could be accomplished by the use of local therapy, as sulphur, which is used until now. He stated that internal drugs were not effective and local treatment had to go on for two or three more days after the cure of the itch. This time would be necessary to prevent relapses because of the presence of eggs that, after hatching, could then start a new biological cycle of the parasite.
雷第将博诺莫的信印成小册子发表，立即引起了争议。主要的反对者是教皇的御医兰西西。兰西西虽然承认疥虫的存在，但是不相信它是疥疮的病因，而是引经据典地指出体液因素才是疥疮的病因。既然教皇的御医开了金口，而且还引用基督教《圣经》作为依据(《旧约•利未记》曾提到疥	Redi published Bonomo's letter as a booklet, which immediately caused dispute. The major opponent was the Pope's chief physician Lancisi. Although Lancisi recognized the presence of the scabies bug, but he didn't believe the bug was the cause of scabies, and he, based on literature, pointed out that humoral factor was the cause of scabies. Since the Pope's Chief physician had spoken, and he also invoked the Bible as his base	Immediately after the letter of Bonomo and publication of Redi's book,[2] the Pope's chief physician, Giovanni Maria Lancisi (1654-1720) began a dispute with Bonomo. Lancisi thought scabies had a humoral origin that preceded the proliferation of the acarus, and, although he recognized the presence of the parasite, he discarded it as the single cause of the disease. In the course of this dispute, because of Lancisi's position as the Pope's chief physician, the fact that he invoked the Scriptures, and the fate of

疮)，为了避免像布鲁诺、伽利略那样受到宗教迫害，博诺莫就没有争论下去。	(scabies was mentioned in Old Testament Leviticus), to avoid the religious persecution suffered by Bruno and Galileo, Bonomo stopped the debate.	previous scientists as Galileo; Bonomo was persuaded not to continue the debate.
23 年后，到了 1710 年，博诺莫和雷第都已去世，塞斯托尼在一封信中才重提对疥虫的发现，但是把这个发现归于自己的名下，没有提及博诺莫，以致有人怀疑博诺莫其实是塞斯托尼为了免受宗教迫害用的化名。	23 years later, in 1710, both Bonomo and Redi had passed away, Cestoni mentioned the discovery of scabies bugs, but he attributed the discovery to himself, didn't mention Bonomo, therefore some people suspected that Bonomo was Cestoni's pseudonym used to avoid the religious persecution.	Raspail stated that Cestoni, a pharmacist of Livorno, Italy, wrote a letter to the celebrated Italian naturalist, Francesco Redi, in 1687, under the pseudonym of Giovan Cosimo Bonomo because he feared persecution, since his ideas related to scabies were opposed to the spontaneous generation theories.[5] In January 15, 1710, thus twenty three years after Bonomo had written his experiences to Redi, Cestoni wrote a letter to Antonio Vallisnieri, repudiating the original one and claiming the entire credit for the discovery of acarus, which appeared just under Bonomo's name, for himself.[13]
从那以后，这个发现就没人提及，被人遗忘。医生们仍然相信疥疮是体液因素导致的。直到 1834，一名叫里努奇的学生重新发现了疥虫是疥疮的病因，才引起了医学界对此的兴趣。1844 年，希伯拉通过在自己身上做实验，详细地阐明了疥疮的病因、症状和治疗方法，终结了关于疥疮的争论。希伯拉还赞扬了博诺莫和塞斯托尼的开创性研究，他们的名字因此载入史册。博诺莫被认为是人类医学史上首次确定一种疾病的正确病因的第一人，此时距离他的伟大发现已经过了 150 多年。	From that time on, the discovery was not mentioned by any other people and forgotten. Physicians would still believe that scabies was caused by humoral factor. It was till 1834, when a student named Renucci re-discovered that the scabies bug is the cause of scabies, which aroused the interested in the medical community. In 1844, Hebra, by self-experiments, elaborated the etiology, symptom, and treatment of the disease, which settled once and for all the problem of scabies. Hebra also made a eulogy of Bonomo and Cestoni's original research, and their names were written into history because of that. Bonomo has been considered in the medical history the first person who ever identified the pathogen of a disease, and by that time, more than 150 years had passed since his great discovery.	His discovery was then completely forgotten.[6] …… It was only in 1834, almost two centuries later, that Renucci, a young student, re-established the fact that the acarus was the cause of scabies.[15] After this, a period of intense investigations on scabies began, and Ferdinand Hebra (1816-80), by particular self-experiments, was the one that did the most to settle once and for all the problem of scabies. He published his views on diagnosis, etiology, and treatment of this disease in 1844 and made an eulogy of Bonomo's and Cestoni's work.[16] It was Cumston, in 1924, who credited Bonomo for the discovery and first description of Sarcoptes scabiei,[5] and, finally in 1927, Razzauti came across Bonomo's signed letter which had been preserved in the Library of Fraternità di S. Maria of Arezzo.[14] Its publication that year proved that, in fact, the discovery of the acarian origin of scabies preceded Renucci's paper and its official scientific recognition by 150 years.[3]
要改变人们的传统思想是很难的。如此简单明了的一个科学发现尚且要过了这么长的时间才能获得人们的认可，何况其他更为复杂难解的争端。	It is very difficult to change people's traditional thinking. Even such a simple scientific discovery needed such a long time to be recognized, let alone the more complicated controversies.	

Notes

[1] Ge Xin. *Shamelessness Shouldn't Be Anyone's Nature——An Open Letter to Nature, Part XLVI: The Hanly War (VII): The Pseudoscholar*. China Academic Integrity Review, Jan. 28, 2015.

[2] Fang's original Chinese: "疥疮是由于疥虫寄生在人体引起的，疥虫钻入皮肤，在皮肤中间穿行打隧道、产卵，引起过敏反应，导致皮疹、瘙痒。博诺莫被认为是人类医学史上首次确定一种疾病的正确病因的第一人，此时距离他的伟大发现已经过了 150 多年。"

[3] Wang's original Chinese: "方舟子在新华每日电讯上发表了'科普'文章《一种寄生虫引起的争端》，我仔细阅读并分析了这篇'科普'文章，发现方舟子这篇文章的科普作用其实很小。方舟子做科普是假，以'科普'的名义制造他需要的虚假的证据是真。以'科普'来证明他那不靠谱的韩寒作品《求医》有人代笔的论点才是其真实目的。" (汪亚民：《世界上有两种科学，一种是科学，一种是方氏"科学"》，汪亚民的新浪博客，2012-02-21 01:51:04。)

[4] Wang's original Chinese: "方在这篇 1800 多字的'科普'文章，表面上看是介绍了疥疮这种疾病和疥疮这种疾病的病因的认识历史以及疥虫的发现历史；但是细心的读者不难发现，方舟子这篇文章的着力点是两个。第一个是，要通过所谓'科普'证明韩寒在《求医》这篇小说中描述的因疥疮引起的全身瘙痒不是疥疮导致而是肝炎引起的。"

[5] Wang's original Chinese: "第二个是，通过对科学史的挖掘揭示科学发现的困难以及改变人们固有观念很难的历史事实，企图证明人们要接受他对韩寒的质疑需要很长时间的一种无奈的心境。换句话说他试图在为自己质疑韩寒得不出结论找一个"科学"的避难所；前提是把自己装扮成代表科学永远正确的化身。"

[6] Ge Xin. *Shamelessness Shouldn't Be Anyone's Nature——An Open Letter to Nature, Part XX: Fang's Plagiarism History: The Longevity Case*. China Academic Integrity Review, March 31, 2013.

[7] Stelwagon, HW. *Treatise on Diseases of the Skin: For the Use of Advanced Students and Practitioners*. W. B. Saunders Company, *Philadelphia,* 1905. p.1087.

[8] Walton, SF. and Currie, BJ. 2007. *Problems in Diagnosing Scabies, a Global Disease in Human and Animal Populations*. Clin Microbiol Rev. 20(2): 268–279.

[9] Executive Committee of Guideline for the Diagnosis. 2008. *Guideline for the diagnosis and treatment of scabies in Japan (second edition)*. Journal of Dermatology 35(6):378-393.

[10] CDC-DPDx. *Scabies*. *Laboratory Identification of Parasites of Public Health Concern*. Page last reviewed November 29, 2013.

[11] Wikipedia. *Naked eye*.

[12] Fang's original Chinese:"一向对科学史和科学哲学感兴趣"、"我最想做的，是对生物学的历史、方法和思想做点思考"（刘华杰：《网上访科学/人文两栖学人方舟子》，2000 年 2 月 21 日《科学时报》）

[13] Fang's original Chinese: "在学术上，我更喜欢探讨科学哲学和科学史的问题"（刘菊花：《网络奇才方舟子》，XYS20010728，http://www.xys.org/xys/netters/Fang-Zhouzi/Net/interview_liujuhua.txt；《读〈溃疡——直面中国学术腐败〉》，2001 年 7 月 18 日《工人日报》）。

[14] Ge Xin. *Shamelessness Shouldn't Be Anyone's Nature——An Open Letter to Nature, Part XXV: Fang's Plagiarism History: The Michigan State University Case*. China Academic Integrity Review, May 19, 2013.

[15] Ge Xin. *Science Quack Fang Zhouzi*. (亦明：《科学骗子方舟子》。)

[16] Original Chinese: “湿疥者，小疮，皮薄，常有汁出。并皆有虫，人往往以针头挑得，状如水内瘸虫。” (巢元方：《诸病源候论·三十五卷》。)

[17] Hoeppli, R. 1956. *Parasitological Reviews: The knowledge of parasites and parasitic infections from ancient times to the 17th century*. Exp. Parasitology 5:398-419.

[18] Busvine, JR. *Insects, Hygiene and History*. Athlone Press, London. 1976. p.208.

[19] Hebra F. *On the diseases of the skin, including the exanthemata*. Translated by C. G. Fagge and P. H. Pye-Smith. New Sydenham Society, London. 1868. p.169.

[20] *ibid*, pp.169-170.

[21] Beeson, BB. 1927. *Acarus scabiei. Study of its history*. Archives of Dermatology and Syphilology 16: 294–307.

[22] Mouffet, T. *Insectorum sive Minimorum Animalium Theatrum*. Thomas Cotes for Benjamin Allen, London. 1634. p.266. Original Latin, the English translation is from: Packard, FR. *Annals of Medical History*. P.B. Hoeber, New York.1937. p.220.

[23] See: [19], pp.173-174.

[24] Kaposi, M. *Pathology and Treatment of the Diseases of the Skin*. Translated by James C. Johnston. Wm. Wood & Company, 1895. p. 651.

[25] *Vocabolario degli accademici della Crusca*. Appresso Giouanni Alberti, 1612. p.603.

[26] See: [19], p.173.

[27] Bonomo, GC. *Osservazioni intorno a' pellicelli del corpo umano fatte dal dottor Gio. Cosimo Bonomo, e da lui con altre osservazioni scritte in una lettera all'illustriss. sig. Francesco Redi*. per Piero Matini, all'insegna del Lion d'Oro, 1687.

[28] Tanga, M. 2007. *Giacinto Cestoni, i rapporti con Redi e le scienze della vita nel XVII secolo*. Tesi di dottorato, Università degli Studi di Pisa, Facoltà di Lettere e Filosoia, Dottorato di ricerca in Storia della Scienza. p.93.

[29] See: [19], pp.174-175.

[30] See: [18], pp.209-211.

[31] Rayer, P. *Treatise on Diseases of the Skin*: *Founded on New Researches in Pathological Anatomy and Physiology*. Translated by W. B. Dickinson. John Churchill, London. 1833. p.381.

[32] See: [19], p.175.

[33] Faucci, U. *Contributto alla storia della scabbia*. Siena, Bernardino, 1932. The quoted words were adoped from: Marcia Ramos-e-Silva. *GIOVAN COSIMO BONOMO (1663-1696): Discoverer of the etiology of scabies*. International Journal of Dermatology 1998;37(8):625-630.

[34] See: Anonymous. 1932. *Contributo alla storia della scabbia*. Archives of *Dermatology* and Syphilology 26:592.

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[39] Original Italian: "Egli è un speziale; ma ne sa di più di 40 medici." See: *GIACINTO CESTONI*; *Diacinto Cestoni*; *Diacinto Cestoni*.

[40] See: [28], p.103.

[41] Italian Wikipedia: *Giovanni Cosimo Bonomo*.

[42] See: [28], p.84.

[43] See: [19], p.179.

[44] Lanzono, J. *Observationes Circa humani corporis Teredinem, à Cl. Joh. Cosmo Bonomo, Practico insignissimo Liburni, una cum aliis Epistolica hac in Exercitatione*. In: Michaelis Bernhardi Valentini Dissertatio Epistolica De Consuetudine Altera Natura: Ad Per-Illustrem Dominum Dn. Joh. Georg. Volckamerum, S.C.M. Medicum, Noribergae, 1692. pp.33-44.

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[46] Wikipedia: *Richard Mead*.

[47] See: Mead, R. *Medical precepts and cautions*. J. Brindley, London. 1751. p.166; 1755 edition, p.242. Also see: *The medical works of Richard Mead, M.D.* C. Hitch, L. Hawes, London, 1762. pp.655-658.

[48] Pringle, J. *Observations on the diseases of the army in Camp and Garrison*. A. Millar, London. 1753. pp.301-302.

[49] Hunter, J. *Lectures on the principles of surgery*. Philadelphia: Haswell, Barrington, and Haswell, 1839. p.376.

[50] See: Pernet, G. 1925. *Historical notes on scabies, with remarks on the Palaeonology of the Acarus*. British Journal of Dermatology 37:312–316.

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[52] Adams, J. *Observations on Morbid Poisons, Acute and Chronic*. J. Callow, London, 1807. pp.294-296.

[53] See: [19], pp.179-180.

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[55] The English translation is adopted from [18], p.240.

[56] See: [19], p.182.

[57] See: [19], p.180.

[58] De Geer, C. *Memoires pour servir à l'histoire des Insectes*. Volume 8. De l'imprimerie de L.L. Grefing, 1778. p.94.

[59] von Rosenstein, NS. And Murray, JA. *Anweisung zur Kenntniß und Cur der Kinderkrankheiten*. Dieterich, 1768. p.410.

[60] von Rosenstein, NS. *Traité des maladies des enfans*. chez Pierre-Guillaume Cavelier, libraire, 1778. pp.525-526.

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[63] Galés, JC. *Essai sur le diagnostic de la gale, sur ses causes, et sur les con?quences médicales pratiques a déduire sur les vraies notions de cette maladie*. chez Méquignon, 1812.

[64] *ibid*, pp.11-12.

[65] *ibid*, p.14.

[66] *ibid*, p.27.

[67] *ibid*, p.29.

[68] Annonymous. 1814. *Commentary on Jean-Chrysanthe Galès' An Essay on the Diagnostics of the Itch, the Cause of it, and the Practical Medical Inference to be Deduced from correct Views of this Disease*. The Monthly Review, Vol. LXXV, pp.497-499.

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[75] See: [52], p.302.

[76] See: [18], p.211.

[77] See: [31], pp.380-381.

[78] See: [19], p.176.

[79] Wikipedia: *Conflict thesis*.

[80] 孟星辰编著：《新编英汉医学词典（四）》，学苑音像出版社 2004 年版 56 页；郭向东编著：《英汉医学词典全书》第三册，中国民艺出版社 2006 年版 478 页。

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[87] See: [28], pp.106-111.

[88] See: [28], pp.98-100.

[89] Redi was the person who persuaded Cestoni to end the debate with Lancisi (see: [28], p.111). Also, I could not find any information about his support for the theory proposed by Bonomo and Cestoni.

[90] See: [19], pp.181-182.

[91] See: biblestudytools.com: *Compare Translations for Leviticus 14:54*.

[92] See: [19], p.206.

[93] See: [19], pp.232-234.

[94] See: [19], p.235.

[95] See: [18], p.214.

[96] See: [19], p.191.

[97] See: [19], pp.191-192.

[98] See: [19], p.191.

[99] Gerlach, AC. *Krätze und Räude: entomologisch und klinisch bearbeitet*. Hirschwald, Berlin, 1857. pp.68-70.

[100] Wilson, E. *On Diseases of the Skin; A System of Cutaneous Medicine*. Henry C. Lea, Philadelphia, 1868. p.199, p.208.

[101] Stelwagon, HW. *Treatise on Diseases of the Skin: For the Use of Advanced Students and Practitioners*. W.B. Saunders Company, *Philadelphia,*1905.

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[103] Fang's original Chinese: "美国法庭，在认定抄袭时，使用一条铁证：原作有技术性错误的地方（比如引文错误、错别字等），抄袭者也一一跟着犯错。以至有些辞典、目录的出版商，故意留几个无关紧要的、不起眼的小错误，以便用做指控别人抄袭的铁证。" See: Fang Zhouzi. 1999. *Did Guo Moruo Plagiarize Qian Mu? House Book*, 25(5):21-29. 方舟子：《郭沫若抄袭钱穆了吗?》，1999 年 5 期 21-29 页。)

[104] Original Chinese: "这篇又是抄的哪里的？" (Posted by 呢波原 at 2012-2-14 19:01 as a comment on Fang's post: 2012-2-14 18:58.)

[105] Original Chinese: "方舟子这篇是不是也是抄的？没有任何注明引用。" (Posted by DavidY 海峰 at 2012-2-14 20:12 as a comment on Fang's post: 2012-2-14 18:58.)

[106] Original Chinese: "又到处抄，你说你什么时候把你现在自己的事情弄好啊？老婆都不要为了自己的利益真是恶心" (Posted by 过客背影 2012at 2012-2-14 20:41 as a comment on Fang's post: 2012-2-14 18:58.)

[107] Original Chinese: "又抄了一篇？" (Posted by yaozheng at 2012-2-14 21:38 as a comment on Fang's post: 2012-2-14 18:58.)

[108] Original Chinese: "抄袭的！！！！" (Posted by 省劲省心 at 2012-2-14 22:24 as a comment on Fang's post: 2012-2-14 18:58.)

[109] Original Chinese: "晕，抄个文章还不忘赖上韩寒。" (Posted by 珍藏版大馬 at 2012-2-14 23:48 as a comment on Fang's post: 2012-2-14 18:58.)

[110] Original Chinese: "抄的吧？方舟子。" (Posted by 弘爱阅读邓运清 at 2012-2-16 01:03 as a comment on Fang's post: 2012-2-14 18:58.)

[111] Yi Ming. *A Chain Plagiarism Case Caused by a Parasite: The 7th Open Letter to Xinhua Daily Telegraph*. China Academic Integrity Review, June 12, 2014. (亦明：《一种寄生虫引起的连环抄袭案：给《新华每日电讯》的第七封公开信》，中国学术评价网，2014 年 6 月 12 日。)

[112] Since July 4, 2012, I have sent 8 open letters to Mr. Xie Guoji, the editor-in-chief of *Xinhua Daily Telegraph*, to report Fang's scifooling and plagiarism in his articles published in the newspaper:

No.	Title	Date
1	《给〈新华每日电讯〉总编辑解国记先生的一封公开信》	07/04/2012
2	《方巨骗，还在骗》	09/21/2012
3	《老偷巨骗，先偷后骗》	10/17/2012
4	《方老偷，还在偷》	11/02/2012
5	《〈新华每日电讯〉继续充当贼窟黑店》	11/30/2012
6	《〈新华每日电讯〉是方舟子的匪窟贼窝》	12/20/2012
7	《一种寄生虫引起的连环抄袭案》	06/12/2014
8	《方氏文贼的方式科唬》	11/29/2014

[113] Yi Ming. *Fang Zhouzi Plagiarized Australian Biologist John S. Wilkins in 2009*. China Academic Integrity Review, April 03, 2011. (亦明：《方舟子在 2009 年抄袭澳大利亚生物学家 John S. Wilkins》，中国学术评价网，2011 年 4 月 3 日。)