

The rutter of 1605

John Newsome Crossley

Monash University, Australia

Email: John.Crossley@infotech.monash.edu.au

© John Newsome Crossley, 2011

[f. 73v] The voyage that Licenciado de los Ríos Procurator of the Philippines made in 1605 from Manila to the coast of New Spain.

July 1605.

We left the port of Cavite in the Philippines in the galleon called *Spiritu Santo*¹ for New Spain on Sunday at 7.30 in the morning. We set sail on 10 July, and having contrary winds we were delayed between the islands up to the Embocadero [Strait of San Bernardino] until 24 July, the eve of the feast of St James. At evening we left [the Island of] Capul with a fresh wind; we travelled until some time the next day in the evening, 25. leagues.

26. July sometime, making the same track, always East one quarter² to the Northeast 20. leagues.

27. at the same bearing ——— 25. leagues.

28. on the same bearing — 25 leagues.

29. on the same bearing — 15. leagues.

On this day I marked the [compass] needle which I had not been able to do so far and the sun being above the horizon $24\frac{2}{3}^{\circ}$, the shadow of the gnomon cut the line to the East at 20° to the South. Afterwards in the middle of the day, the sun being [f. 74r] at the same elevation, the shadow of the gnomon cut the opposite part of the line to the East 12° to the South. so that the difference was 8° and the middle of the variation of the needle was 4° . Having taken the height we went 14° East. [In r. margin: Nordesteava .4.G.] The Embocadero was at barely 13° from where we left.

The weather becalmed us and we went very slowly on 30. and .31 July. We went 20. leagues.

August.

1. de August ————— 8. leagues.

2. on the same bearing — 12. leagues.

¹This was the same ship, *Espíritu Santo*, as de Morga had sailed in to Mexico when he left the Philippines in 1603, de ?, p. 216.

²I.e., a quarter of 45° , i.e. $11\frac{1}{4}^{\circ}$.

Today I marked the needle and the sun rose at 23° from the eastern horizon, East by North. In the afternoon it set at 14° West by North. The difference was 9° . The middle, which was $4\frac{1}{2}^\circ$, was the variation. [In r. margin: Northeast. $4\frac{1}{2}^\circ$]

3. on the same track — 10.

4. The same — 10

5. The same bearing — 15

6. The same bearing — 10

7. The same bearing — 4.

8. Dead calm.

[f. 74v]

9. To the Northeast with a fresh breeze we climbed up to 16° . We went — 25. leagues.

10. Calm. I marked the sun, and it was 21° East by North. The declination of the sun was $15\frac{1}{2}^\circ$ the ortive angle³ was 16° , the difference was 5° of variation from to the Northeast. We went 10 leagues East a quarter point [In l. margin: Northeast⁴ 5°] to the Northeast.

11. The same — 10. leagues.

12. Dead calm.

13. 14. 15. With an east [wind] we made sail North a quarter point to the Northeast.

16. 17. 18. 19. We took the same track with just the *papa[h]igos*⁵ and sailing *tocando*⁶. The altitude was taken and we were in 19° , which is a quarter point to the East. 54. leagues.

This day of 19. August I marked the needle. The sun had a declination of $12\frac{1}{2}^\circ$ y salio por $17\frac{1}{2}^\circ$ on the astrolabe. The variation was the same as before.

[In l. margin: Northeast. 5° . This was misleading since the angle to the East was $13^\circ 15'$ which conformed with the variation being $4^\circ 15'$].

20 We made way to the North with a fresh wind. We went to $20\frac{1}{2}^\circ$.

21. We turned to the South-East – 6. Leagues. The sea began to rise till 22. on which day we turned to navigate Northeast a quarter point to the East until mid-day on the 24. We went 30. leagues.

25. on the same bearing – 20. leagues.

26. Northeast a quarter point to the North – 25. leagues.

[f. 75r]

We reached $23\frac{2}{3}^\circ$, which we calculated by the *punto de Esquadria* [method].⁷

Today I marked the needle in the morning, the sun being raised $40\frac{3}{4}^\circ$, the shadow of the gnomon cut the oriental line, and in the afternoon, being at the same elevation, the shadow cut the opposite part [of the line] at 16° . The middle

³The angular distance of an object at its rising measured from the eastern point of the horizon, otherwise known as the azimuth with respect to the East.

⁴I.e. the needle was to the northeast.

⁵I.e. with just one main sail on either the mainmast or the foremast.

⁶Exposing as little sail to the wind as possible.

⁷A method of calculating latitude when travelling at an angle (other than a right angle) to a meridian. See, for example, ?, especially p. 72, and ?, p. 220.

was the variation to the Northeast, which is 8° . I am not very happy with this marking because of the rocking of the ship. [In r. margin: Northeasted. 8. G.]

27. To the North, a quarter point to the Northeast.

28. To the North-Northeast.

29. On the same bearing. I omitted the variation till we stopped going close to the wind. We got to 27° of latitude. On this day I marked the needle at sunset, and it was one degree from the occidental line to the North. The sun had a declination of barely 9° . Its occidial angle⁸ was $9\frac{1}{2}^\circ$. the variation was $8\frac{1}{2}^\circ$. [In r. margin: Northeasted. $8\frac{1}{2}^\circ$.]

31. Northeast, a quarter point to the North.

September.

1. On the same bearing

2. On the same.

3. Calm.

4. The same bearing, always with light winds.

[f. 75v]

We got to 29° latitude.

I marked the needle and it was 3° east by South. The sun had an occidial angle of 8° , so it varied 11° .

[In l. margin: It was not good. Northeasted 11° .]

5. 6. 7. To the Northeast, a quarter point to the North. We reached 32° of latitude.

8. I marked the needle and the sun set at $4\frac{1}{2}^\circ$ West by South. Its angle was $5^\circ 50$ minutes [In l. margin: Northeasted $10\frac{1}{3}^\circ$] which in total is 10° .

Until 10. we made no significant distance. I corrected the past variations and it made $9\frac{1}{2}^\circ$ of variation well rectified.

11. To the Northeast, a quarter point to the North – 20. leagues.

12. which was the σ [conjunction of heavenly bodies] gave us strong wind and quite a storm. We were running with the poop to the wind ^{totheEast} and on the 13. we went 70. leagues.

14. On a bearing of East-Northeast and the two previous days with the variation we made track to the East a quarter point to the Northeast — 16. leagues.

15. Calm until mid-day and afterwards we had a fresh wind until the 16. at mid-day – 30. leagues.

17. A downpour that seemed miraculous with which we abundantly collected water, something we had been unable to do on all the way up to now. [f.76r] We went on the same bearing and on the 18. with lifeless weather we went 20. leagues.

The day of the downpour we were upon the Isla Rica de Plata because, although we did not see it, some *çanganos* like locusts, lots, and other signs which seemed to us to be on it.

⁸The angular distance of an object at its setting measured from the Western point of the horizon, otherwise known as the azimuth with respect to the West.

18. We got to 37° of latitude. I marked the needle carefully and the sun rose on the horizon of the astrolabe at 16° from the oriental line to the North. The sun had scarcely 2° of ortive angle so that there was 14° of variation [In r. margin: Northeasted. 14°] to the Northeast.

19. 20. 21. To the East, each day 20. leagues.

22. 23. To the East and with the variation being to the Northeast, We reached 39° so that the waters to the North were backing us up – 40 leagues.

24. On the same bearing. This day the needle varied [In r. margin: Northeasted. 19° .] 19. We decreased it one degree because of the variation even though we went to the East – 30 leagues.

25. 26. 27. 28. We went with a fresh wind and a stretch of 150. leagues.

29. We went 25 leagues. We got to 36° .

26. The needle had two quarters if variation when Gaspar Nuñez and the main pilot marked it for us. [In r. margin: Northeasted $22\frac{1}{2}^\circ$] [f. 76v]

30. In the afternoon we had a strong wind until some time on the first of October – 25. leagues.

October

2. and 3. We went — 70. leagues. I marked the needle and the variation was 18° . The main pilot, Francisco de Bolaños, helped. [In l. margin: Northeasted 18° .] The sun set on that day at 22° to the South-West. It had an angle of 4° .

4. To the East. ————— 30. leagues.

5. To the East. ————— 20. leagues

6. To the East. ————— 12. leagues

This day I marked the needle. It had 16° of variation because it it rose in $10\frac{1}{2}^\circ$ to the North. Its latitude was $5\frac{1}{4}^\circ$, this makes $15\frac{3}{4}^\circ$.

7. ————— 20.

8. ————— 25.

9. ————— 15.

10. ————— 25.

11. ————— 25.

12. ————— 15.

13. Calm.

14.. On the same bearing to the East ————— 25.

15 ————— 16. This day I marked the needle [In l. margin: Northeasted. $11\frac{1}{4}^\circ$.] and it northeastd exactly one quarter [compass point].

17. Calm. We changed the sails.

[f. 77r]

18. In the morning the wind rose and until the 19. we went 35. leagues.

From the nineteenth in the morning to the 20. we went 30. leagues.

From 20. to the 21. in the morning she went against the wind — 16. leagues.

From 21. to the 22. in the morning we took the track to the Northeast, and Northeast a quarter point to the North with the *papa[h]igos*⁹ close to the wind.

⁹See note 5.

We went 12. leagues.

This day I marked the sun with Pilot Bolaños who helped me at $1\frac{2}{3}^\circ$ from the horizon of the astrolabe. It had amplitude $12\frac{1}{2}^\circ$. Accordingly the variation appeared $10^\circ 50$ minutes.

[In r. margin: Northeasted. $10^\circ 40$.]

I returned to correct it at sunset and it set in 223° on the instrument on the occidental line to the South. From which results $12\frac{1}{2}$ of latitude. There remained $10\frac{1}{2}^\circ$ of variation. I also corrected it in another way and in all it had the same variation.

This day until the 23. in the morning we went to the East-Northeast. We took the track from a quarter of the variation of the needle — 20. leagues

From the 23. to the 24 on the same bearing — 20. leagues.

From the 24. to the 25. in the morning on the same bearing. We went always with the South-East — 20 leagues.

[f. 77v]

From the 25. to 26. in the morning with the sea rising we made no way.

From the 26. to the 27. with a light wind from the Northeast we made way to the South-east a quarter point to the East — 10. leagues.

From the 27. a 28 : on the same bearing and this day and the night before they got to 38° . — 10. leagues.

From the 28. in the morning until the 29. to the East a quarter point to the South-East. And then to the East, and then to the South-East 20 [leagues].

From the 29. to .30. with a storm and only the *papa[h]igos*. 30. leagues.

From the 30. to 31. we went 30. leagues.

From 31. till the first of November — 25. leagues.

November.

From the first to the 2. we went — 20. leagues. This day I marked the needle although without much satisfaction because the ship was rocking badly. [In l. margin: Northeasted $2\frac{1}{2}^\circ$.] It varied to the Northeast $2\frac{1}{2}^\circ$. Till the 3. in the morning we went — 30.

We saw *perillos* on this day, the 3. November until the fourth in the morning 35. leagues.

From the 4. to the 5. in the morning — 35 leagues. This day [In l. margin: land.] in the morning we appeared 2. leagues from land in latitude 36° and i marked the needle at sunrise, it being calm and I fixed the pole because the sun rose on the 19. from the East [f.78r] to the South and the amplitude was $19\frac{1}{2}^\circ$ with a declination of $15^\circ 47$. The main pilot helped me with this marking and the night before the guards having been placed, he marked it in the South-east with my instrument and with the captain and Maestro Gaspar Nuñez who is a trainee pilot. We had [In r. margin: Aguja Fixa] no variation, and likewise he marked his needle and the main pilot his and all were fixed on the pole.

This land runs Northeast South-East and then from there a quarter point east-west till some islands which they call the Santa Barbara Channel [California]. In the evening I corrected the needle.

From the 5 to the 7 we were in calm. We went very little. We recognized the land in barely 36° . It is a straight coast, two leagues of land with 100 fathoms. I do not know how deep. The land is high with some peaks, and around all the tops there are many pines. Some distant from other large ones, and in some valleys there appear plantations. The remaining bare ground runs to $35\frac{1}{2}^\circ$ in this way to the South-east. Later we reached a bay that seemed to be a strait and extended some 6 leagues from the mouth. The land is Saxa [?] and seems to be quicksand at the edge of the sea, or very white land pointing from this bay to the other [f. 78v] which seems further on to run Northeast South-East a quarter point North-South. It is in $35\frac{2}{3}^\circ$ and from there there appears another point which is that of Santa Barbara running to the South-east. It is in 35° .

7. We steered South a quarter point to the South-east keeping ourselves out from the land with little wind and we got to an altitude of $35\frac{1}{6}^\circ$. I took it [the altitude] and that night, which was calm, gave us a fresh wind, and the pilot came close to the land steering to the South-East and leaving the Islands of Santa Barbara, and in the quarter of the *alua* [?] we went to investigate one that appeared to me to rise more out of the sea and to the West of it a league apart a steep rocky peak. We passed through the middle and left steering with a fresh wind Northeast to South-East getting away from the land. in the morning there appeared the Islands in the poop port quarter some 6. leagues away. Later we steered to the South-East with a fresh wind astern. We got to about $33\frac{1}{2}^\circ$. This was the 8. [November].

9. on the same bearing we did not get to $31\frac{2}{3}^\circ$.

10. Steering to the South-South-West we came on the Cinder islands *Islas de Cenizas* which are in about 30° and the wind eased so we were there all the afternoon. It is high land made in the shape of a sugar lump *pan de asucar* [f.79r] with very extended folds this seems from outside we discovered and it reaches two at [each side?] It runs. 2. leagues northeast southwest with high cliffs and is very deep [?] round there. In the beginning of the line of the land it has a little [fronelloncillo?] which although it is standing so much in front it does not seem to be on the same point and later it runs some . 5. leagues. The curve to the south-south-east and it has a cape which is a point below two little islands half a league apart in this way [Here a large sketch of Guadalupe Island is included.]

11. On the same south-south-east with little wind we got to 29° ..

12. On the same we got to 27° .

13. To the south-east we got to 26. $G\frac{1}{2}$.

14. To the south-east we went with a fresh wind to [f. 79v] 25° or more and we came across 3 islands which seemed like sailing ships. ¹⁰ Steering through the middle we left them and we passed some .3. leagues from them at the edge of the sea and standing northeast south-west there appeared another, much lower, and naturally still from nearby they appeared like ships with white sails

¹⁰These are identified as the Escollos Alijos or Los Alijos Rocks in latitude $24^\circ 57' N$ by ?, p. 27. The latitude agrees very well. The longitude is $115^\circ 44' W$. Brand claims that the *Espíritu Santo* was under the command of de los Ríos.

and these were where they deceived the bishop of Nueva Segovia [Salazar] and those who were coming with him in the galleon *San Jeronimo* and they gave the news that there were english and certainly who did not notice those they encountered. This was in 25° where the land of them opens 8. leagues. From there we went steering all of that day until the middle of the next day which was the 15 of the month and we reached 23° .

15. In the middle of the day we were making way south-east and with little wind we got to $21\frac{1}{2}^\circ$ at night. This day I marked the needle, the sun being at $18^\circ 44'$ of declination and the amplitude 22° . And it set by the astrolabe in 17° on the horizontal of the occidental line to the south of south-east so that the variation of the needle was [In l. margin: Northwest. $3\frac{1}{2}^\circ$] $3\frac{1}{2}^\circ$ which northwested from where we arrived at the fixed which passes through the islands and the Santa Barbara channel in latitude 35° .

[f. 80r] At this time we were on the meridian and the Cape of San Lucas [southernmost point of Baja California] some 25 or 20. leagues north south.

From the 16. to the 17. with very little wind. 18, 19, 20 and 21 we were navigating to the east a quarter point to the south-east and we got to 20° or more and until 22 to the east with scarcely any wind.

Today, the .22. I marked the needle. The sun rose at 23° by the astrolabe and set at 23° on the astrolabe on the oriental and occidental line to the south of south-east so that the difference was 4° [In r. margin: Northeasted. 2.G.] that is 2. that I northeasted the needle.

23, 24, and 25. we were navigating to the east and we reached land in the morning and I went and marked the needle in the evening, being near Port Navidad [Port Navidad, Manzanillo, Mexico] and the sun set at 22° on the line from the west to the south and in the morning the sun rose, being in front of Puerto de Sajaga which is five leagues from Port Navidad more to the southg. It rose in 22° from the east to the south so that I saw no difference at all and so I went to fix the needle once more. [In r. margin: Fixed.]

In the Port of Acapulco on 9 December of 1605, I marked the needle and it being before mid-day the sun being up at $41\frac{1}{6}^\circ$, the shadow of the gnomon cut the bottom plate *timbo* of the astrolabe at 50° from the west to the north, and after mid-day [the sun] being in the same elevation it cut at [f. 80v] 55° from the west to the north so that the variation is half the difference, which is $2\frac{1}{2}^\circ$ which I north-easted once more.

I took the latitude in the port, and it is in 17° minus a sixth. [Very close to the actual $16^\circ 51'$ N].

In Mexico I tool the variation of the needle, the son being at En Mexico tome la Variacion del aguja tiniendo el sol $13^\circ 43'$ of declination on 27 April being in $6^\circ 30'$ of γ [Taurus] the needle had a variation in the northeast of $3^\circ 50'$. I took the latitude and it was $19^\circ 10'$ north.

[Line 8 of f. 80v.]

References

- Alves Gaspar, J. (2007). The Myth of the Square Chart. *Perimetron* 2(2), 66–79.
- Barreda, F. (1786). *El Marinero instruido en el Arte de Navegar especulativo y practico que para la Enseñanza de los Colegiales del Real Seminario de Santo Telmo*. Oficina de Vazquez, Hidalgo, y Compañía, Impresores de dicho Real Seminario [de Santo Tomel]. Second impression.
- Brand, D. D. (2001). Geographical explorations by the Spaniards. In D. O. Flynn, A. Giráldez, and J. Sobredo (Eds.), *European entry into the Pacific: Spain and the Acapulco-Manila galleons*, Volume 4 of *The Pacific World : Lands,, Peoples and History of the Pacific, 1500–1900*, pp. 1–54. Aldershot: Ashgate, Variorum. Originally published in *The Pacific Basin, A History of Its Geographical Exploration*, ed. Herman R. Friis, American Geographical Society, 1967, pages 109–144.
- Morga, A. (1971). *Sucesos de las Islas Filipinas*. Cambridge: Published for the Hakluyt Society at the University Press. Translated and edited by J.S. Cummins. First published in 1609 in the house of Geronymo Balli by Cornelio Adriano Cesar in Mexico.