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A TENTH *Memoir on the Law of Storms in India, being the MADRAS and MASULIPATAM STORM of 21st to 23rd May, 1843.* By HENRY PIDDINGTON. *With a Chart.*

Between the 21st and 23rd May, 1843, a very severe hurricane was experienced on the coast of Coromandel, which seems to have extended from a short distance South of Madras to Masulipatam and Coringa. Great mischief was occasioned by it on shore and along the coast, and several vessels foundered at sea, or were driven on shore, among which were the ships and brigs *Amelia Thompson, Favorite, Inez, Union, Braemar, Joseph* and *Victor*, &c. with others more or less disabled.

It is to the always active zeal of Captain Biden of Madras, that I am indebted for the greater part of the documents from which the present Memoir is drawn up. I have as usual abridged them as far as possible, but so as to preserve carefully all the essential facts. I commence at Madras, with the logs of the ships farthest to the Southward; I then take those to the Eastward to trace the storm in its progress across the Bay, and finally, I give those to the North of Madras, as far as Calcutta. I then add, as usual, a summary shewing the grounds on which I have laid down the track of the storm, and embodying such other remarks as may have occurred to me.

Abridged Log of the Ship BUSSORAH MERCHANT, Captain FARRIER, from Bombay to Calcutta, reduced to civil time.

18th May 1843.—P. M. strong monsoon, W. N. W. and West, with squalls and rain. 4 P. M. abreast of Point de Galle, distance 7 miles.

19th May.—Rounding Point de Galle, and at noon wind W. by S. and fine; steering N. E., latitude $5^{\circ} 52'$ N. longitude account $82^{\circ} 12'$ E. 4 P. M. strong W. by S. breeze. Bar. 29.56,* increasing to a hard gale W. by S. at midnight.

20th May.—Gale continuing W. by S. latitude account $7^{\circ} 20'$ N. Bar. 29.26. P. M. continued heavy gale W. S. W.; squalls, rain and heavy sea; midnight Bar. 29.26.

21st May.—Day-light *more moderate*, wind S. W.; at noon Lat. $8^{\circ} 30'$ N., longitude $86^{\circ} 29'$. P. M. strong gale South, with heavy squalls continuing to midnight.

22d May.—A. M. finer, but gale continuing from the South to noon, when latitude $12^{\circ} 00'$ N., longitude $87^{\circ} 24'$ E. Bar. 29.36. P. M. South and S. S. E. monsoon gale, to midnight.

23d May.—Noon latitude $14^{\circ} 34'$ N., longitude $86^{\circ} 30'$ E., wind S. S. W., steady monsoon gale from midnight.

Extract from the Log of the Ship RAJASTHAN, Captain AIKIN, from Calcutta to Mauritius, reduced to civil time.

19th May.—A. M. brisk breeze E. S. E. and S. E.; at 7 A. M. S. E. by E.; at noon, ship standing to the S. S. W. Noon latitude observed $9^{\circ} 1'$ N., longitude $88^{\circ} 16'$ E. P. M. increasing with squalls, and Bar. stated to be “falling.”† At midnight *more moderate*, wind S. E. by E. to East and N. E.

20th May.—1 A. M. wind N. E.; 4 A. M. wind shifted to the West; day-light increasing; 6h. 30m. hard gale from Westward; at 10 A. M. wind marked West; noon, Bar. 29.20; from 30.00, at which it had before stood, wind West. P. M. wind W. by S. Ship running from 1 A. M. from 5 to 7 knots to the Eastward, strong gale W. to midnight.

21st May.—A. M. the same; 5 A. M. hauled up to the S. E. by E. Noon, gale had moderated to fresh gale and heavy sea, latitude $8^{\circ} 12'$ N. Bar. 29.70. To midnight hard gale S. S. W.

22d May.—A. M. the same to noon, when latitude $7^{\circ} 48'$ N., longitude $91^{\circ} 45'$ E. Bar. 29.60. P. M. fresh gale, being on 23d and following days the usual monsoon.

* Corrected by a comparison in Calcutta.—H. P.

† Its height not given at this time.

Abridged Log of the H. C. Steamer TENASSERIM from Aden, bound to Calcutta, civil time.

21st May 1843.—A. M. fresh breeze from W. N. W., variable towards noon with squalls, and squally appearances all round from E. S. E. to W. N. W. and a heavy sea. Latitude $6^{\circ} 48' N.$, longitude chronometer $78^{\circ} 3'$. P. M. wind S. and S. W. fresh and squally. Midnight brisk gale with heavy squalls and showers and a heavy sea. Bars. at 4 A. M. 29.92 and .75. Noon 29.90 and .72. 4 P. M. 29.90 and .72.

22nd May.—Wind S. W., weather and sea the same. Latitude $5^{\circ} 3' N.$, longitude $80^{\circ} 3' E.$ P. M. wind W. S. W. and S. W. strong breezes and sea. Barometer 4 P. M. 29.80 and .40. Noon 29.30 and .40.

23d May.—Winds W. to S. W. by W., weather and sea the same. Noon, latitude $6^{\circ} 49' N.$, longitude $82^{\circ} 58' E.$ P. M. to midnight the same weather. Barometer at 4 P. M. 29.30 and .55.

23d May.—4 P. M. went into Trincomalee harbour.

Abstract of Log of the Bark CORINGA PACKET, from 13th to 22d May, civil time. From Captain BIDEN.

18th May, fine weather. Barometer fell from 29.70 to 29.50. At 8 P. M. 29.45, the weather still looking fine, sent down royal yards, took one reef in the top sails. Point Pedro bearing W. S. W., distance about 140 miles; midnight strong N. E. winds. Barometer 29.40.

19th.—2 A. M. a tremendous squall from E. S. E. attended with heavy lightning, struck the ship, and hove her on her beam ends; before being able to shorten sail, the main sails and fore and maintopsail were blown out of the bolt ropes. 4 A. M. blowing a fresh gale attended with heavy rain, bent another maintopsail, close reefed it, and set it. Daylight blowing a tremendous gale from E. by S., the sea running in pyramids, and the ship labouring very heavy. 8 A. M. Barometer 29.30. 10h. 30m. A. M. a very large water spout formed within about 2 cables length from the ship, passed across her stern, and hove the ship round head to wind, the fall of water on board the ship was tremendous. Observed the Barometer to rise immediately to 29.45. Noon

the sea abated, wind flew round to the N. W. in a tremendous squall, and the weather began to look more favorable. Observed Flag Staff Point, Trincomalle, bearing West, distance 10 miles. 3 P. M. wind from Westward, a strong double reef topsail breeze with clear weather.

20th.—Moderate throughout. Barometer at 28.50. 8 P. M. weather looking very bad to the W. S. W. Midnight blowing a heavy gale.

21st.—3. A. M. the gale increasing, and the sea rising, hove the ship to under close reefed maintopsail. Daylight blowing a terrific gale, the sea running in all directions, the ship labouring very heavy, and at times on her beam ends, the maintopsail blew out of the bolt rope. Barometer 29.40. Noon, latitude $5^{\circ} 30'$ N., longitude $83^{\circ} 40'$ E. 4 P. M. the sea and wind abated a little. 6 P. M. moderating fast, made sail gradually. 8 P. M. Barometer rising fast. Wind at West. Midnight fresh breeze and fine. Barometer 29.65.

22nd.—Moderate and fine; during the gale of the 19th and 21st, the ship has not suffered the least, and made no water.

Madras, 10th July, 1843.

(Signed) T. B. CHILCOTT.

Abridged extract from the Log of the Ship MARQUIS OF HASTINGS, Capt.

J. BIDDLE, *from Singapore bound to Calcutta, reduced to civil time.*

Forwarded by Capt. BIDEN.

20th May, 1843.—Noon latitude $11^{\circ} 51'$ N., longitude $95^{\circ} 5'$ E. Moderate S. by W. to W. S. W. at midnight.

21st May.—S. S. W. wind to noon. Daylight, Narcondam bearing N. W. $\frac{1}{2}$ N., breeze freshening to 6 knots with squally weather to the Westward. 8 A. M. heavy squall from S. W. Noon moderate. P. M. light and cloudy and squally to Westward; wind S. W. to midnight.

22nd May.—Weather squally; S. W. by W. to S. S. E. wind; a cross sea from S. W., latitude $14^{\circ} 52'$, longitude $93^{\circ} 57'$ E. P. M. Preparis bearing West, distance 10 miles, light winds N. W., dark and squally. midnight strong breezes N. W. and heavy sea.

23rd May.—A. M. the same strong breeze and heavy cross sea, wind N. W. Noon latitude account $16^{\circ} 42'$, longitude $92^{\circ} 4'$ E. At 6 P. M. wind about West. At P. M. veering to S. W., and moderating to the usual monsoon at midnight.

24th May.—Noon latitude $17^{\circ} 58'$ N., longitude $90^{\circ} 10'$ E. Light Vessel, computed to bear N. W. $\frac{1}{2}$ N. distance 200 miles.

Ship BRAMIN. Extract forwarded by Capt. BIDEN.

The ship Bramin from Singapore bound to Madras, had from 20th May, between latitudes 8° and $8^{\circ} 38'$ N. heavy threatening weather from S. by W., veering gradually to S. W., and reducing her to close reefs till the 23rd, when the weather became finer. No Barometer or longitudes are given in her log, but we may take it that she was far to the Eastward, and that this was the usual weather at the setting in of the monsoon.

Extract from the Log of the Barque SERINGAPATAM, from Acheen Head to Madras, reduced to civil time. Forwarded by Capt. BIDEN.

From the time of leaving Acheen Head, we had a continuance of gloomy unsettled weather to the—

20th May.—Wind S. S. W. 4 P. M. increasing gales, heavy squalls with rain, thunder and lightning, latitude $7^{\circ} 30'$, longitude $98^{\circ} 50'$.

21st May.—At noon wind S. S. W., latitude $9^{\circ} 10'$, longitude $88^{\circ} 50'$. Commences with heavy squalls, with rain, thunder and lightning, a heavy confused sea.

At 8 P. M. increasing gales, heavy squalls, gloomy weather close reefed topsails, and reefed foresail.

Throughout these twenty-four hours, a continuance of heavy squalls and gloomy weather.

22nd May.—Wind S. W. by S., latitude 10° , longitude $85^{\circ} 30'$. Commences with heavy gales and squalls of rain, thunder and lightning, a heavy confused sea, under close-reefed topsails; latter part more moderate, made sail.

The remainder of the passage gloomy, unsettled weather, squally with rain, thunder, and lightning, with a continuance of threatening appearances.

S. FOSTER, *Mate.*

Abstract of the Log of the Transport Barque TEAZER, from Madras to Penang with Troops on board, reduced to civil time. Forwarded by Captain BIDEN.

19th May, 1843.—At noon latitude $12^{\circ} 00'$ N., longitude $81^{\circ} 28'$ E. Barometer 29.72. Thermometer 86° . Weather very threatening, and winds variable, hove to; the wind not marked, but apparently from S. W. to S. S. W. At 3 P. M. made sail, winds to midnight marked about S. E.

20th May.—Shortened sail and hove to again at noon, in consequence of the threatening weather and disturbed sea; wind marked as variable from E. to N. N. E. Noon no observation, latitude account $11^{\circ} 18'$, longitude account $82^{\circ} 40'$ E. Barometer 29.70. Thermometer 86° . P. M. every appearance of bad weather, wind increasing to strong gale from about N. W., violent squalls and rain. Wind not marked, but from about 9 P. M. “running free,” course E. S. E., 8 knots, to midnight, under close reefed maintopsail, foresail, and foretopmast staysail; gale increasing fast.

21st May.—2 A. M. “scudding almost before it,” course E. S. E., 9 and 10 knots (hence wind W. by N. or West? but not marked!) At 8 a very violent squall W. N. W. veering to S. W. 11h. 30m. foresail blew from the yard, ship scudding 12 knots, broached to. Noon hove to, a complete hurricane. Barometer 2 A. M. 29.70

6 „ 29.40

8 „ 29.30

Noon „ 29.20

Noon, latitude account about $10^{\circ} 43'$ N., longitude $85^{\circ} 4'$ E.

P. M. gale continuing, wind not marked,

4 P. M. Barometer 29.20

„ Midnight 29.45

22nd May.—At 7 A. M. gale a little moderated. Noon latitude in-different observation $11^{\circ} 25'$ N., longitude $85^{\circ} 10'$ E. Barometer 29.60. P. M. wind marked S. S. W. and at 5 P. M. South; gale moderating to midnight: making sail and repairing damages.

23rd May.—More moderate, wind still (apparently) South. Noon latitude by account $11^{\circ} 58'$ N. longitude $86^{\circ} 27'$ E. Barometer 29.66. Thermometer 86° . P. M. moderating, but still threatening.

24th May.—Fine. Noon latitude $11^{\circ} 10'$ N., longitude $88^{\circ} 37'$ E.
Barometer 29.68. Thermometer 88° .

At Penang, the Meteorological Register kept there by order of Government, gives at 9h. 40m. A. M. the following state of the Barometer for—

17th May 1843,	29.954
18th ditto	— .886
19th ditto	— .888
20th ditto	— .938
21st ditto	— .926
22nd ditto	— .944
23rd ditto	— .930

There is nothing in the remarks of the weather, &c. to indicate any extraordinary disturbance.

Observations at Calcutta. By H. PIDDINGTON.

21st May, Sunday Evening, 1843.—8 P. M. stars particularly clear and brilliant, The zodaical light like a comet ; to the South, stars visible at 5° elevation.

22nd, Monday.—A. M. Barometer fallen from 29.8 on the 21st to 29.7, squally from S. S. W. with light rain, and in the evening a heavy shower, East heavy nimbus. Barometer 29.76

23rd, Tuesday.—Dark gloomy weather, squalls and rain from S. W. and South. Bar. 29.70.

24th Wednesday.—6 A. M. Barometer 29.775, dark gloomy nimbi from East to Zenith. To the Westward clear with strata at intervals. To the Southward, at times much smoky scud driving rapidly across from the East, light breezes and puffs at intervals, with drizzling rain from the East.

At the Surveyor General's Office at Calcutta, at Noon, the Barometer on these days stood as follows :—

May 21st	Bar.	29.698
„ 22nd	„	— .665
„ 23rd	„	— .590
„ 24th	„	— .610

At Bombay the Standard Barometer corrected to Temp. 32°, was at

20th	..	...	29.572
21st	..	..	Sunday.
22nd	..	..	— .456
23rd	..	..	— .395
24th	..	..	— .434
25th	...	...	— .495

From the Madras Athæneum.

Vizagapatam.—On the evening of the 21st ultimo, the rain commenced pouring down in torrents, and continued so for the space of nearly one week, accompanied by a strong wind, which set in from the North East, veered round to the East and blew a furious hurricane from that quarter; during its continuance, a solitary Dhoney which was riding at anchor in the roads, having been the previous evening deserted by the greater portion of her crew, parted from her anchor, and was driven to the shore with only three men on board; and she went to pieces a very short time after. A native brig also ran ashore, (intentionally as is generally supposed,) and she now lies a total wreck about a mile or two to the Northward of this place. Recent accounts from the Northward mention the fact of wrecks of vessels being strewn along the coast, and that about a dozen native craft have wrecked or foundered between this and Ganjam.

Abridged Extract from the Log of the Brig UNION, Captain SPRINGER, from Coringa bound to Pondicherry, reduced to civil time. Forwarded by Captain BIDEN.

The *Union* left Coringa on the 19th May 1843, on which day at noon Coringa Light House bore West about 7 miles distant. P. M. light winds, and at midnight fresh breezes Eastward.

20th May.—Noon, wind E., latitude 15° 1' N., longitude 82° 37' E. P. M. freshening from N. E. Evening and morning with heavy rain; made preparations for bad weather. Midnight strong gales, apparently N. E. Vessel very leaky, and heaving cargo overboard.

21st May.—To noon gale increasing. No longitude or latitude marked. P. M. wind marked N. or N. by W. Vessel scudding, and gale increasing to midnight.

22nd May.—Gale still continuing, but apparently veering to the Westward, for it is marked at W. N. W. At 1 P. M. vessel scarcely kept afloat and sinking, but always scudding.

23rd May.—1 A. M. wind S. W. At 7 A. M. saw the bark *Helen*, Captain Driver, and succeeded in getting on board of her, the brig going down shortly after. At noon on this-day, *Helen's* latitude was $11^{\circ} 50' N.$, longitude $82^{\circ} 30' E.$

*Abridged Report of the Master Attendant of Coringa, forwarded by
Capt. BIDEN, civil time.*

20th May.—A. M. N. E. Wind 1 P. M. Easterly. 10 P. M. N. E. fresh breeze, with thunder and cloudy weather to the Southward.

21st May.—Wind N. E. with heavy squalls throughout; latterly constant showers of rain.

22d May.—A. M. Wind N. E. At 5 P. M. Easterly heavy gales, and constant showers of rain throughout.

23rd May.—1 A. M. wind marked S. E. 3 A. M. Southerly, moderating to fine weather at midnight.

*Abridged Log of the Barque Candahar, Capt. RIDEX, from Bombay
bound to Calcutta, civil time.*

19th May, Friday.—Throughout light variable breezes E. N. E. to E. S. E. Noon latitude $15^{\circ} 26' N.$, longitude $81^{\circ} 30' E.$

20th May.—A. M. 5 knot breeze N. E. by E. to S. E. and N. E. at noon, when latitude $16^{\circ} 06' N.$, longitude $82^{\circ} 13' E.$ 4 P. M. Barometer had fallen to 29.60, with threatening appearances; made all snug for a storm. At 10 P. M. wind N. E. by E. increasing rapidly to midnight.

21st May.—A. M. wind N. E., storm increasing with violent squalls, ship lying to. A barque to windward, sea very high, Barometer down

to 29.55. No observation, latitude account $15^{\circ} 40'$, longitude $82^{\circ} 40'$ E. P. M. to midnight increasing storm, sea making a clear breach over the vessel.

22nd May.—A. M. heavy gale N. E. weather as before. At 10 A. M. wind marked at S. E. Barometer at 8 A. M. 29.35. Noon latitude by account $15^{\circ} 30'$ N., longitude account $83^{\circ} 00'$. 1 P. M. “blowing a perfect hurricane at S. E. with a terrific cross sea.” 1h. 30m. P. M. Barometer at 28.83. At 2h. 30m. P. M. “hurricane at its highest, and drawing round to the Southward; vessel making very bad weather.” At 4h. 30m. P. M. Barometer inclining to rise a little, but no change in the weather. “Hurricane continuing to blow if possible with more fury.” At 6 P. M. “hurricane having shifted to South, wore ship as we were drifting fast in shore.” 8 P. M. Barometer 29.29, and wind more moderate. Midnight a heavy gale with squalls at times.

23rd May.—A. M. hard gale S. S. W., daylight abating, but sea very heavy. Noon latitude $15^{\circ} 38'$, longitude $83^{\circ} 20'$ E. Wind S. S. W., strong gale to midnight.

24th May.—Strong monsoon from S. W. to W. S. W., latitude $17^{\circ} 42'$, longitude $85^{\circ} 00'$. On the 25th, arrived in soundings, and on 26th at noon, Point Palmiras Light House bore N. E. by N. 4 or 5 leagues.

Abridged Log of the Barque EUPHRATES, Capt. WILSON, from London, bound to Calcutta, reduced to civil time.

19th May, 1843.—To noon fine weather, wind from East to N. E. by E., which had also been about its direction for the preceding 24 hours. Noon latitude $14^{\circ} 51'$ N., longitude $81^{\circ} 28'$ E. P. M. to midnight the same winds and weather.

20th May.—Winds from N. E. to North, freshening from North at noon, and from latitude $16^{\circ} 21\frac{1}{2}'$ N. longitude $81^{\circ} 40'$ E. At 10 A. M. Masulipatam bore W. $\frac{1}{2}$ N., 10 miles. P. M. moderate breeze E. N. E. increasing at 8 with thunder, lightning and rain. Midnight very threatening appearance; wind E. N. E., making all snug and standing to the S. Eastward.

21st May.—By 6 A. M. hard gale E. N. E. 10 A. M. *variable*. At noon N. Easterly, hard gale and squalls, with heavy rain. Latitude

by observation $14^{\circ} 40' N.$, longitude $82^{\circ} 52'$. "An Easterly current the last 24 hours, the high Easterly swell *preceded* the wind about 4 hours, and the sea got up very rapidly with the wind,"* Noon, Barometer 28.90. Sympiesometer 28.80. At the commencement of the gale, Barometer 29.80. Sympiesometer 29.60. P. M. hard gale N. E., high cross sea. Midnight very hard gale. Wind at 9 P. M. Easterly. Midnight E. S. E.

22nd May.—5 A. M. blowing a hurricane. 7 A. M. wind S. E. by S., wind drawing S. E. and Southerly in the squalls. Noon wind S. S. E., hurricane still continuing. Latitude account $14^{\circ} 08' N.$, longitude $82^{\circ} 29' E.$ P. M. continued heavy hurricane at South. Hail and rain at 1 P. M. 6 P. M. Barometer rising rapidly, wore and bore up to the N. E. by E. 7 P. M. wind S. S. W. 8 P. M. Barometer 29.20. Midnight hard gale and heavy squalls.

23rd May.—2 A. M. wind S. S. W. 6 A. M. to noon moderating, and sail was gradually made, wind S. S. W. Latitude observation $16^{\circ} 17'$, longitude $83^{\circ} 44'$. "A set of 62 miles South $69^{\circ} E.$ in the last 48 hours." To midnight variable, and squally from the South to S. S. W.

Abridged Log of the Barque LORD ELPHINSTONE, Captain CRAWFORD, from Madras towards Vizagapatam; civil time. Forwarded by Captain BIDEN.

21st May, Sunday, 1843.—First part cloudy weather with wind from N. N. E. to N. E. Barometer falling from 29.98 to 29.55. At 3 P. M. dark gloomy appearance with sudden gusts of wind, prepared for bad weather. At 11 P. M. severe squalls. Midnight strong gales from N. N. E. to N. E., veering between the two points. Barometer, middle part 29.50 to 29.42, latter part and noon 29.20. Latitude $15^{\circ} 45' N.$, longitude $83^{\circ} 15' E.$ by dead reckoning.

22nd Monday.—Severe gales from N. E. to E. N. E. and East; at 10 A. M. blowing very hard with a high sea; at 10-30 severe squalls split the double reefed topsails; Barometer 29.8 hove the ship to with

* This remark is worth attention. The Easterly set was probably the outpouring of the Godavery.

a tarpauling on the weather mizen rigging, at noon terrific squalls, got the anchors secured with extra lashings, ship behaving very well, Barometer from 28.8 to 29.0, 28.90 and 28.80. At 1 P. M. a heavy sea struck the back of the rudder, carried away some of the pintles and gudgeons, got a hawser passed over the stern to keep the rudder steady; at 2 if possible, blowing harder, the lee side of the fore castle, and top-gallant rail under water; wind veering from East to E. S. E. and S. E. blowing very severe.

23rd Tuesday.—Barometer at 2 A. M., 28.75 wind hauling to S. S. E. the hawser securing the rudder cut through, the rudder now beating from side to side at a most fearful rate making all tremble; at 5 wind South, at 6 broke down the after cabins to get at the rudder, all the pintles being gone with the exception of the upper one; succeeded in lifting it out, and letting it go clear of the ship. 8 P. M. wind moderating at S. S. W. Midnight Ditto; Barometer 29.0 to 29.5 and 10.

24th Wednesday.—Ship making a great deal of water, observed the counter stove in, and the rudder case all started in consequence of the time it took to get clear of the rudder; all hands, with the passengers, employed at the pumps; at 2 getting more moderate, commenced making a jury rudder with the spanker boom for a main piece and 20 fathoms of chain cable.

25th May.—Employed at the pumps and rudder, got it over and made sail; latitude $16^{\circ} 18'$ longitude $83^{\circ} 18' 45'$ E. deemed it proper to haul up for Coringa to repair damages, at 4 P. M. sighted Coringa Light. Noon, anchored in the Roads, the crew quite exhausted from incessant labour.

This hurricane according to Col. Reid's Theory of Storms, passed from E. N. E. in a W. S. Westerly direction, and the centre of it could have been no great distance from us to the southward, at least not more than from 6 to 8 miles.

I have seen the Commander of the unfortunate *Amelia Thompson*, he says this Hurricane commenced with him from N. Westward, veering to West and S. Westward, thereby shewing that the centre of this turning wind or hurricane was to the Northward of him.

The Barometer is by Troughton and Sims, a most excellent instrument, its average range in ordinary weather is from 29.90 to 30.10 and 30.12.

(Signed,) H. CRAWFORD.

Extract from the Log of the Barque LYNDON from Madras towards Vizagapatam, reduced to civil time. Forwarded by Capt. BIDEN.

20th May Saturday, 1843.—1 P. M. of 19th, winds E. N. E. steady breezes and fine weather; 4 P. M. ditto wind and weather; 6 steady breezes and cloudy weather; 8 squally; 10 wind E. by S. midnight squally with rain, wind E. by N. At 2 A. M. 20th increasing winds and squally with lightning to the Eastward. Daylight *decreasing winds* and cloudy weather. At 8 winds E. N. E. and ditto weather, at 10 squally. Noon steady breezes and fine, watch employed bending mainsail. Latitude by observation 18° 42' North.

P. M. Winds E. N. E. fresh breezes and cloudy weather; at 4 increasing breezes and cloudy. At 6-30 increasing wind, at 8 fresh winds and cloudy with lightning. At 10-30 strong breezes and squally. At 12 strong breezes and squally.

21st May.—A. M. Wind N. E. by E.; at 2 increasing gales; at 3 and at 10 strong gales. Wind E. N. E. squally weather at 11 severe gales; noon, increasing gales and very severe squalls; sun obscured. P. M. Wind E. N. E. strong gales and squally; at 5-45 increasing gales and severe squalls. At 8 severe gales and thick hazy weather; at 9 increasing gales and very severe squalls with rain, laid the ship to under the close reefed trysail and double reefed spanker; at 12 strong gales and very heavy squalls.

22d May.—At 4 increasing gales and severe squalls with rain, Daylight heavy gales and very heavy squalls. At 8 blowing a tremendous hurricane. Noon the same. P. M. wind N. E. by E. 30 wore ship; at 1 P. M. shift of wind from the westward, and the ship under bare poles; at 3 wind W. S. W.; at 4 blowing a tremendous hurricane, and the ship lurching very heavily, filled the larboard quarter boat, cut her away; at 4-30 ship lurching very heavy, greatly damaged starboard quarter boat, carpenter prepared his axes to cut away masts if necessary. At 5 carried away the spanker gaff; at 6 the hurricane abated a little; at 8 very strong gales and severe squalls with thick hazy weather. Midnight strong gales and severe squalls with thick hazy weather.

23d May.—Daylight inclined to moderate with decreasing squalls. At 10 more moderate; at noon decreasing wind and cloudy, sun obscured. 7 A. M. wind S. S. W.; 10 S. W.

P. M. Wind S. W. by S. At 7 S. by W. P. M. strong gales heavy squalls, rain, and a heavy swell running; at 5 more moderate; at 10 increasing gale. Midnight increasing squalls with rain.

24th May.—At 4 P. M. moderate with a fine clear sky; daylight moderate; 10 wind S. by E.; 11 South; Noon moderate and fine; latitude by observation $16^{\circ} 24'$ N.

To the foregoing Log, Captain Biden adds the following valuable notes obtained by him from Captain Corney.

“I have just got hold of Captain Corney of the Lord Lyndoch, he says at $\frac{3}{4}$ past Noon on Monday the 22d, the Barometer fell from 28.35 to 27.95—at 10 A.M. it was at 28.35—he says the strongest gusts were about 1 P. M. when there were intermitting severe gusts, *accompanied by great and terrible heat—and there were alternate gusts of heat and cold* after the hurricane veered to S. W.*

“The commencement of the Gale was from N. E. by N., just after Midnight on the 20th—all the 21st the Easterly gale continued—the change was preceded by a dead calm which lasted $\frac{3}{4}$ of an hour.—, and the shift was about *one p. m.* on Monday, when the Barometer was at its minimum—a tremendous cross sea arose at this time, but the swell from the S. W. soon subdued that which had got up from the Eastward. Rain and drift of sea accompanied the hurricane, darkening the atmosphere very much—sails were blown away from the yards, though well secured with studding sail gear, &c.

Ship was nearly thrown on her beam ends. Poultry drowned on lee side of the Poop.”

Abridged Log of the Ship JULIA, Capt. JONES, from Calcutta to the Mauritius, reduced to Civil time.

18th May.—Noon in latitude $18^{\circ} 29'$ longitude $89^{\circ} 38'$. Calms and light rains to midnight. “Heavy clouds rising from S. E. quarter. Barometer only 29.75, which is lower than it stands generally.” Midnight light S. W. breeze.

19th May.—2 A. M. light S. E. breeze to noon when latitude $18^{\circ} 05'$ longitude $89^{\circ} 06'$ observation. 7 P. M. freshening, vivid lightning S. S. E. to S. S. W.; midnight steady breeze S. E.

* The italics are mine.—H. P.

20th May.—1 A. M. Barometer 29.72. Noon, increasing breeze S. E. by E. squally and heavy head sea; latitude $16^{\circ} 09'$ longitude $88^{\circ} 13'$ Barometer 29.75. P. M. hard squalls wind E. S. E. threatening appearance to the Eastward. 7 P. M. severe gusts with rain and lightning; 11 P. M. wind S. E. by E.; 1 P. M. Barometer 29.55; at 6 P. M. 29.50; at 9, 29.50; midnight 29.50. Thermometer 86° throughout.

21st May.—S. E. by E. gale, with increasing heavy cross sea; 2 A. M. S. E. Noon strong gale; latitude account $13^{\circ} 50'$ longitude $86^{\circ} 46'$ Barometer 1 A. M. 29.50; 4 A. M. 29.50; 6 A. M. 29.49; 9 A. M. 29.48 Thermometer 86° . P. M. wind S. E. to S. S. E. severe gale. 6 P. M. severe gale with squalls at times “attended with a thick fog.” Midnight the same weather; 1 P. M. Barometer 29.48; 6 P. M. 29.48.

22d May.—To noon, wind S. E. to S. S. E. severe gale with heavy cross sea; latitude account $13^{\circ} 47'$ longitude account $86^{\circ} 05'$ E. Barometer 1 A. M. 29.50; 6 A. M. 29.50; 10 A. M. 29.50. Thermometer 86° . P. M. wind S. E. to South, strong gales and sea as before. 4 P. M. moderating a little; 7 gale increasing again, midnight strong gale and clear weather, wind about South. P. M. Barometer 29.45; 6 P. M. 29.45; 11 P. M. 29.40. Thermometer 86° .

23d May.—A. M. The same gale from South. Barometer 5 A. M. 29.40. 11 A. M. 29.40; Ther. 86. Noon latitude observation $15^{\circ} 47'$ longitude $85^{\circ} 20'$. The Log remarks that the Vessel had suffered much by the heavy cross sea arising from a S. E. and S. W. swell for the last 24 hours. P. M. wind Southerly, more moderate; 5 P. M. again increasing. Barometer 1 P. M. 29.55. 6 P. M. 29.55; Ther. 86° .

24th May.—A. M. becoming fine; wind South to Noon, when latitude observation $15^{\circ} 42'$ N., longitude $85^{\circ} 51'$ E. Barometer at 2 A. M. 29.60; 11 A. M. the same. Thermometer 86° .

*Extracts from the Log of the Transport CHAMPION, Captain BUDD,
reduced to civil time. Forwarded by Captain BIDEN.*

18th May.—Light airs from E. N. E. and hot, sultry weather; strong set to the Northward, and much swell from the Eastward, latitude $14^{\circ} 6'$. Barometer 29.9.

19th, *Friday*.—Light airs from E. N. E. and sultry weather, latitude $15^{\circ} 29'$. Barometer 29.85. P. M. light breeze from the Eastward and heavy wind.

20th *Saturday*.—A. M. Cloudy weather and much lightning with heavy swell from the Eastward; latter parts squally with distant thunder and vivid lightning and suspicious looking weather; saw the land off Narsapour Point. Latitude $16^{\circ} 9'$. Barometer 29.85 to 29.75. P. M. fresh increasing breeze from N. E. and heavy swell, exchanged signals with the “Inez;” prepared for bad weather. Throughout the night hard squalls from Eastward and E. N. E. with a heavy sea getting up and much rain and lightning.

21st *Sunday*.—From daylight to noon blowing a strong gale with occasional hard squalls and rain; under a close reef main topsail and close reefed mizen. Latitude by account $15^{\circ} 31'$. Barometer 29.70. P. M. heavy gale and increasing, with much sea, and ship labouring greatly, wind drawing to E. S. E. Midnight, increasing in violence with tremendous squalls and rain.

22d *Monday*.—Ship now labouring greatly with the heavy seas, lashed one half of the new poop awning to the Gaff to assist in keeping to. Barometer 29.60.

P. M. Wind drawing round to the Southward and inclining to lull; suspecting a sudden shift round to the S. W. immediately wore ship, which no sooner done, and, had the yards again secured, when it commenced blowing a perfect hurricane from South, accompanied with dark weather, and tremendous heavy rain and high sea, which threw the vessel completely on her beam ends, staving in the quarter boat. I now fully expected every instant to see the masts all go by the board, as from the great and constant labouring of the vessel the rigging had become quite slack, and the topmasts were pressed over like a bow; fortunately we had taken the precaution previous to have swifters on, as in righting again and rolling suddenly to windward, it would all have snapped during the tremendous gusts, and after, it was impossible to distinguish any thing the length of the vessel, from the violent rain and drift of the sea which completely washed over all. From our position by reckoning, and great drift which we have experienced whilst lying to from the commencement, and heavy seas from the eastward and S. E. and which still in-

creased in force carrying the vessel right before them, I fully expected, should the wind not draw round to the S. W. that we should be driven before night upon Narsapour Point, for the wind had hung so constantly to the Eastward that with difficulty we could obtain an offing; immediately after the vessel righted I got below to my cabin and found the Barometer had fallen suddenly from 29.60 to 29.20.* the gale continued without intermission with hard squalls and rain with tremendous cross sea until midnight.

23d Tuesday.—Midnight drawing round to S. S. W. and abating in strength afterwards, when we made a little sail and kept away East. During most part of the night the pumps were constantly at work. From daylight to Noon decreasing, but still hard squalls; by indift obsn. Latitude $16^{\circ} 0'$ Longitude $83^{\circ} 20'$: found we had experienced a strong lee current.†

24th Wednesday.—P. M. decreasing with passing squalls and much sea, wind S. S. W. Barometer 29.60.

25th Thursday.—The weather commenced moderating and sea subsiding, anchored at *Vizagapatam*, Barometer 29.60. to 29.90.

VINCENT BUDD,

Commander.

Report from the Bark Chatham, Capt. GIFFORD, forwarded by the Marine Board.

In the Bay I experienced a severe gale from N. E. to S. E. commencing on Saturday the 20th May at 10 P. M. and lasting to Monday the 22d May noon, when it moderated. My Latitude was 16° Longitude 84° in the height of the gale, by dead reckoning, and by comparing logs with the Euphrates. I find it was more severe 30 miles S. W. of our position.

WM. GIFFORD.

Report from Masulipatam by R. ALEXANDER, ESQ. forwarded by Capt. BIDEN.

Masulipatam 23d May, 1843.

From the weather we have experienced here I fear that you have had a gale at Madras, and bad weather both to the Northward and

* The italics are mine, for this remarkable fall is a very curious phenomenon.

† The storm wave.—H. P.

Eastward, the weather has been unsettled here for some days, and since the 20th the wind has been from the N. E. On the 21st we had heavy squalls with rain, with the Barometer falling. From yesterday morning the Barometer fell rapidly as you will observe by the following memorandum.

22nd May at 4 P. M.	Bar.	29.080	
	4.30	.050	
	5. gale, increasing and blowing in violent gusts.		
Violent Gusts 6.24	Bar.	28.900	
	6.30	.875	
	7.	.820	much lightning to S. and S. E. and thunder.
	7.30	.730	
	8.	.760	
	8.30	.730	
	9.	.760	
	10.	.760	
	10.30	.760	
P. M.	11. Bar.	28.774	
	11.30	.820	
	12.	.940	
23rd	1 A. M.	.980	
	2	29.050	$\frac{1}{2}$ P. M. 2 wind changing to E. S. E. and then to S. and S. b W. blowing with great violence with drizzling rain.
	3 A. M.	29.100	
	4	.150	
	5	.175	Noon the Barometer is now up to 29.300 blowing fresh from the Southward.

Two Brigs and one Sloop are on shore, and four Brigs have lost their main masts; several of the cargo boats are driven inland, as well as a sailing boat of my own missing, with large stores of firewood and timber. Great damage has been done in consequence of the sea having inundated the place; the inundation extended beyond the first range of Garden Houses, and the Causeway is rendered useless, the sea having flowed over it and breached the retaining walls in several places, besides carrying away all the stone coating; the Bund leading

from the Fort to the Village of Gillumdindee is also breached. The sea flowed into the Fort through the East and sea gates, one doney is left close to the brick work of the pettah gate, a large boat is lying against the Causeway, and part of a Lower mast lying on the causeway half a mile from the Fort.

Trees in every direction have been blown up by the roots, windows and doors of substantial houses blown in, and a number of Native huts and buildings destroyed. From Noon of the 21st to 5 P. M. 22nd, we had 2.025 inches of rain. I have just received a report of one Brig having foundered with all on board, with the exception of one Lascar who saved himself on a plank.

Masulipatam, 15th Sept. 1843.

MY DEAR SIR,—The greatest violence of the gale on the coast, appears to have been felt here, although it was felt as far North as *Culingapatam*. I have no information with regard to the distance it extended to the Westward, and in the Guntoor and Patnaud Districts the damage appears to have been caused by the torrents of rain, while here all the rain that fell during the gale did not amount to $2\frac{1}{2}$ inches, there was thunder and lightning during the gale, but not much. The gale commenced from N. E. and N. N. E. and ended at S. W.

*Report from the Acting Master Attendant at Pulicat. Forwarded by
Capt. BIDEN.*

We had a strong gale here, accompanied with heavy rain, which commenced on Sunday morning the 21st at about 11 o'clock—blowing N. N. W., and abated the following day at noon. I am happy to add that, with the exception of a few old buildings which fell down, no other material injury was done at this place; no vessels were in these roads on the day of the gale.

Abridged Reports from Madras, by Captain BIDEN.

The range of the Barometer at Madras during the late gale was from 29.67 to 29.37—and at Ennore, about 8 miles to the Northward

of Madras it fell as low as 29.30 at 3 A. M. on the 22d instant. Wind veering throughout the 21st from N. N. W. to W. N. W.—the quantity of rain which has fallen in 48 hours is $10\frac{1}{2}$ inches. Fourteen vessels put to sea from these Roads between 11-30 and 1 P. M. on the 21st May.

CORDELIA.—Went as far out as $82^{\circ} 20'$ E. Latitude $11^{\circ} 30'$ N. Barometer fell to 29.0 and continued as low as 29.20 two days. The heaviest of the gale was from N. W. ending at S. W. on Tuesday. During the gale the sea was very heavy and confused, more so than commonly in such gales.

BRAHMIN from Singapore to Madras, Saturday 20th May, squalls at 4 P. M. midnight dark cloudy weather. Wind throughout veering from S. W. to S. S. W. 6 A. M. heavy squalls with much rain— Noon gale increasing ; wind S. by W.

Sunday 21st.—Strong gale and squalls with much rain. Wind S. by W. Midnight ditto weather. 6 A. M. more moderate, noon clear, latitude observation $8^{\circ} 16'$ N.

22d Monday.—Commenced with unsettled weather, heavy squalls with much rain, throughout squalls and unsettled weather, wind veering from S. W. to S. S. W.

Tuesday 23d.—Strong breezes and squalls, wind S. S. W. Midnight dark cloudy weather. 4 A. M. more moderate and clear. Noon wind S. W. clear weather, latitude observation $8^{\circ} 38'$.

The *Barque BRAEMAR* slipped from Madras Roads with the wind at N. N. W., N. W. and finally W. N. W., She was laid on her beam ends and righted only by cutting away her masts, the wreck of which carried away her rudder. The Vessel became water-logged and nearly unmanageable and was driven by noon 23rd May to latitude by observation $12^{\circ} 55'$ N. Wind at 1 P. M. on 22d civil time, being W. S. W. and at 1 A. M. 23d S. W. by S. She was finally driven on shore and wrecked near False Point Divy.

Ship HENRY.—Put to sea from Madras Roads, and had the wind veering from N. N. E. at 1 P. M. on the 21st May, to S. W. by W. at noon on the 22d, when the Barometer was at 28.90. At midnight, wind S. W. Barometer 29.20, the gale moderating towards daylight on the 23rd ; at noon of which day she was in latitude $13^{\circ} 18'$ and at noon of the 24th in latitude $12^{\circ} 26'$ N. longitude $81^{\circ} 57'$ E.

Brig BRITON.—This vessel slipped and ran to sea with the wind at N. W. at 1. 30. P. M. on the 21st May civil time. At 7 the wind was North, and at 10 N. N. E. Vessel steering E. by S.

On the 22d at 5 A. M. the wind shifted to West in a hard squall. At noon hard gale, latitude by indifferent observation $12^{\circ} 15' N$; by account $12^{\circ} 35'$: longitude account $82^{\circ} 51'$. Barometer 29.20, having made by log 158 miles E. by S. and E. S. E. from Madras roads.

The wind marked S. W. fresh gales at midnight, moderating.

On the 23d at noon latitude observation $11^{\circ} 36' N$. Account $12^{\circ} 7'$ Barometer $29^{\circ} 40'$, Chronometer 83.25. Account 83.52.

Ship BABOO—had increasing gales as she proceeded to the Eastward, and at 2 A. M. on Monday 21st May, had it blowing very hard from W. N. W. with continued sleet showers, thunder and lightning. Two Barometers at their lowest 28.29. On Monday 22d at noon, latitude obs. $12^{\circ} 33' N$. and longitude per 2 chros. $82^{\circ} 0^{\circ} E$. Since then had the wind mostly from S. S. W. to West. *Baboo's* Barometer when she slipped was at 29.20, and here it stood, then at 29.57; her Barometer is therefore .37 below the true range.—N. B. See subsequently her report.

Report of Capt. STUART of the Barque BABOO, to Capt. BIDEN. Forwarded by that Officer.

On Sunday at 12-30 we slipped from 80 fathoms cable and went to sea.

Had an increasing gale as we went to the Eastward, and at 2 A. M. on Monday 21st May had it blowing very heavy from W. N. W. with continued sleet showers and much thunder and lightning. My two Barometers at their lowest 28.29.

The *Kyd* was the last of the ships seen by us on Sunday evening, and none of them were seen afterwards. I laid my ship to, having broke part of the wheel and got the man steering maimed, otherwise we had no casualties.

On Monday at noon my latitude was per observation $12^{\circ} 33'$ N. and longitude per two Chronometers 82.0 E., since then had mostly the winds from S. S. W. to West.

Ship ISABELLA WATSON, Capt. J. A. MACDONALD, from Madras to Calcutta: report from her Commander, reduced to civil time.

19th May 1843, Friday.—The weather was close and sultry with a heavy swell rolling in on the beach indicating the approach of a storm. Thermometer at noon $83^{\circ}43'$, sympiesometer 29.36.

20th Saturday.—A. M. hove short and made sail from Covelong; 7 A. M. came to anchor in Madras Roads, hard squalls from the N. W. with heavy rain; observed the flag flying at the fort for all ships to prepare for sea. Thermometer 48° , sympiesometer 29.26. P. M. squally and variable from N. E. to North with heavy rain.

21st Sunday.—A. M. made sail from Madras Roads, at 4 A. M. hard squalls and rain from N. N. E.; 10 A. M. blew very hard with squalls and rain from N. E. to N. and a high turbulent sea running. Under close reefed main top sail; noon blowing very hard with a high cross sea and heavy rain. Thermometer $83^{\circ}30'$, sympiesometer 29.16.

A continuance of the N. E. gale. At 2-30 P. M. Thermometer 84° sympiesometer 28.96. The ship labouring this time most fearfully, 8 P. M. Thermometer 83° sympiesometer 28.84. 9 P. M. Thermometer 83° , sympiesometer 28.0 a fearful sea running.

22nd May.—3 A. M. a heavy squall with hail and rain; 8 A. M. the gale blowing with greater violence with a turbulent cross sea, making a fair breach over the ship, and straining her very much. Thermometer 83° , sympiesometer 28.64. Noon ditto weather.

Madras bearing by account West and by North 70 miles.

2 P. M. Thermometer $83^{\circ}30'$, sympiesometer 28.70. 3 P. M. sympiesometer 28.84, the weather more moderate, but a turbulent sea, the wind flew suddenly from N. W. to West. At 4 P. M. it came from S. W. and continued so with dark weather and rain.

23rd May.—At noon Thermometer $84^{\circ}30'$, sympiesometer 29.11.

*Abridged Report from Capt. ONSLOW, of the Ship GENERAL KYD,
to the Secretary to the Marine Board, Calcutta.*

The ship General Kyd, of 1318 tons burthen, (old measurement) left the Bengal passage, Acheen Head, on the evening of the 9th May, civil time, with a pleasant breeze and very sultry weather from the N. Eastward.

This continued for some days with squalls and variable weather at times, and sudden sharp squalls and rain, and that throughout the passage from Acheen to Madras, to which place we were bound in ballast from China. The weather continued so unsettled, although the Barometer continued high, between 29.70 and 29.90 and the thermometer never below 84°, and on one afternoon at 3 o'clock it stood at 96° in my cabin that I was led to apprehend a gale of wind during the whole passage of eight days. On the 19th May I anchored in Madras roads, and immediately received a notice from the Master Attendant to be prepared for bad weather. On the 20th May the weather was squally and unsettled from the Northward, Barometer at 29.70. In the evening the appearances becoming more favourable I did not leave the shore, but on the morning of Sunday the 21st the sea which is a sure forerunner of a gale on that coast, rose tremendously high, insomuch that I was once capsized in trying to get through the surf, and was very nearly one hour and a half in getting through the second time, with the boat nearly full of water; at noon got on board the ship, the wind then from N. N. W. blowing fresh, shipped the cable and made sail, stood E. by S. At 3 P. M. gradually increasing with thick rain at times and most turbulent sea. At 7-30 P. M., much lightning to the Eastward, but the sky gathering up thick in the Westward, and very unsettled and squally, with a furious sea. At about 8-30 a tremendous squall and a sudden shift to W. by N. Clued up and with difficulty furling the main topsail and rounded to with head to the N. Eastward, ship labouring awfully. Continued strong gale and tremendous sea till about 2-30 A. M. on the 22d, when the wind in a tremendous squall shifted suddenly to the S. W. by W. causing the sea to rise in perfect mountains and in a most confused irregular manner,—the ship then rolling and plunging that I sometimes thought she would not recover herself. About 3-30 the mainmast went over the side followed by every stick except the foremast, bowsprit and fore yard; the ship then

rolled her gunnels under. The strength of this hurricane lasted till about 8 A. M. when it became a little more moderate, but the sea running with unabated fury. Had no observation that day, but the reckoning at noon made us about 68 miles E. $\frac{1}{2}$ S. from Madras. Soon after sunset the wind and sea moderated a little, and by daylight on Tuesday the 23d, we were enabled to get a foresail bent, and set as much sail in various ways as we could, and at noon by observation found ourselves in latitude $13^{\circ} 47'$ N. longitude $82^{\circ} 3'$ E. Barometer 29.44. The breeze settled into a fresh monsoon from S.W. to S.S.E. which weather continued pretty steady till the 31st May, when at 9-30 P. M. we made the Light Vessel at the Sandheads.

State of the Barometer on board the General Kyd, during the late gale, corrected by comparison with that of the Surveyor General's Office, Calcutta.

May 21st at Noon,	29.45
at 3 P. M.	29.38
5 „	29.28
7 „	29.26
9 „	29.19
11 „	29.17
12 „	29.11
2 „	29.11
May 22d at noon,	29.18
2 P. M.	29.19
5 „	29.27
May 23d, noon,	29.42

Thermometer ranging from 82° to 88° .

Ship PROTOMELIA.—Slipped from Madras roads at noon 21st May; at 10 P. M. hove to.

22nd.—4 A. M. blowing a hurricane with heavy thunder, lightning and rain, Barometer 28° noon latitude account $12^{\circ} 49'$, longitude $81^{\circ} 41'$.

23d.—Barometer rising, latitude noon $12^{\circ} 56'$, longitude $82^{\circ} 4'$. This vessel ran, and was driven to $82^{\circ} 30'$ East longitude; and from $12^{\circ} 49'$ N. to $14^{\circ} 8'$ N. She returned safely to Madras.

Brig Dora, report by Capt. HARVEY, Commanding her, to Capt. BIDEN.

On Sunday night I experienced a hard gale about N. West, attended with constant rain, hove to with head to the Northward. *Monday*, at 4 P. M. sudden change of wind from the S. West and more moderate; at noon latitude by observation $12^{\circ} 50'$ longitude $82^{\circ} 25'$ E. Tuesday exchanged colours with the ship *Henry*, latitude $12^{\circ} 56'$. Wednesday 10 P. M. made Madras Light bearing S. West, but owing to the night's looking so dirty I stood off, and have been in latitude $14^{\circ} 5'$, found the current setting strong to the N. Eastward; during the whole I have not lost or strained a rope yarn. Yours respectfully,

May 30th.

WM. HARVEY.

No Barometer; Sympiesometer injured with sea.—C. B.

Barque Coaxer, Capt. RIDLEY.

The heaviest of the gale commenced about midnight on Sunday, when we hove to under bare poles. 4 P. M. on Monday the gale moderated; when we made sail gradually; our Barometer was as low as 29. during the heaviest of the gale; we were as far to the Eastward. as $82^{\circ} 26'$ by Chronometer.

The Bark Orpheus at Anchor at Ennore, forwarded by Captain BIDEN.

20th May.—Begins with light winds from S. S. W. and ends with strong gales from W. N. W. Barometer at 29.305 and falling.

21st May.—Strong gales, heavy rain and thunder and lightning, wind N. W. to W. N. W. throughout, but “*strong swell setting in from the Eastward,*”* is noted in the log at 2 P. M.; when heavy gales which continued to midnight, Barometer 29.4.

* These and the other italics are mine. The “strong swell from the Eastward setting in on the Coast with a gale blowing directly off shore, is a remarkable phenomenon, which can only I think be explained by the progressive motion of the Storm Wave.—See Eighth Memoir, p. 398, Vol. XII, Jour. As. Soc.

22nd May.—A. M. wind N. W. P. M. W. N. W. and West at midnight ; strong gales throughout ; and heavy swell *from the Eastward*. Barometer 29.3.

23d May.—Winds West, W. S. W., S. W. and finally S. S. W. moderating at 6 A. M. to clear weather. Barometer A. M. 29.4 and P. M. 29.5. Strong swell *from the Eastward* A. M. which is noted as going down about noon.

Coringa.—On the night of the 22d May, the French Barque *Joseph et Victor*, Captain Honey, 360 tons, belonging to Messrs. La Forque and Co. of Nantes ; bound from Bourbon to Calcutta with a cargo of 1000 bags of Cloves and a good deal of Specie, was driven on shore to the Southward of the Coringa Light House. About 700 bags of Cloves have been saved as well as the crew and passengers ; it was believed that much more property would be rescued. On the same day the Native Brig *Hamsamalah* of Chittagong, laden with a cargo of salt, was driven ashore 12 miles to the Northward of Coringa, one man lost. On the 26th the *Lord Elphinstone*, Capt. Crawford, bound from Madras to Vizagapatam, put in at Coringa in distress—she had lost topsail yards and all her sails in the gale which set in from N. E., veering to E. S. E. and blowing a furious hurricane from S. S. E.

The *Amelia Thompson* foundered at Sea about 80 miles E. by N. of Madras on Tuesday morning the 23d ultimo at 6 A. M. Part of the crew, consisting of the Captain and 15 men, have been saved, having been in open boats from Tuesday morning until Friday morning, when they were picked up by a native vessel, on board of which they were treated with great kindness, and they ultimately landed at Coringa on Monday last. The remaining portion of the crew, seven in number, have met with a watery grave.

Effect of the Recent Gale in the Interior.—As we had feared would be the case, we regret to say that accounts are daily being received from the interior of the loss of life and property from the recent gale and heavy fall of rain with which it was accompanied—Villages had been swept away and property destroyed to a very large amount, in value, as well in building, as in cattle and grain, &c. &c. and in addition we regret much to add, the loss of human life.—The following extract from the *Spectator* tells a serious tale of disasters.

“We regret to learn by a letter dated Poorshottapolium, 27th ult., that terrible destruction has been caused in the Guntoor district in consequence of the inundation attending the late storm; many villages having been swept away or sustained great damage by the floods which came down suddenly on the morning of the 23d. Swelled by the previous rains, *four* nullahs and *sixteen* tanks near Inacondah, overflowed or swept away their banks, causing a lamentable loss of life and property, of which the following details are given.

“*Rajahpett.*—Three hundred houses destroyed or injured, *seven* lives lost. Poorshottapolium, 200 houses injured, *seven* lives lost. Chilkloorpett, 300 houses injured, *two* lives lost. Pusmorroo, 20 houses injured, *four* lives lost. Annanarum and Toolapanee, 200 houses injured, and *seventeen* lives lost. In addition to the above damage or destruction of above a *thousand* houses, and the loss of *thirty-seven* lives, it is stated, that 2,800 head of cattle and horses and 9,000 sheep perished, and that 2,700 candies of grain were more or less injured. The whole amount of damage being estimated by our informant at above 100,000 Rupees. The total destruction occasioned by the inundation was indeed hardly ascertained, many villages having been damaged or swept away, of which no perfect account had yet been received.

“From the notices now received from distant parts of the country it is evident, that the gale and heavy rain felt here about a fortnight ago, formed merely part of a great atmospheric disturbance ushering in the South-West Monsoon, and traversing the entire peninsula from North to South, marked throughout its course by considerable, though happily only locally, destructive violence. At Delhi on the 17th, unusual weather prevailed. ‘High North-West and Easterly winds and occasional storms of rain, the coolness of the atmosphere being, for the time of the year, very extraordinary.’ At Hyderabad a few days later, the Monsoon set in with great violence, and at Coringa, Masulipatam, Guntoor and Pondicherry, in fact all along the coast in a North and South line, heavy gales and torrents of rain simultaneously prevailed.”

We glean the following from the *Bombay Times* of May 24 :—

“*The Weather.*—Since the evening of Thursday, the sky has looked so troubled, and the barometer fallen so steadily, that we supposed the Monsoon to be at hand. The wind has got round nearly to South-west, and the alternating land and sea breezes have ceased. Our sea

breeze, which blows with so much regularity from the North-west for seven months in the year, has disappeared. On Sunday evening some light showers fell, and the sky has ever since continued black and cloudy. The most singular phenomenon of all is, the remarkable and steady fall of the barometer, which has been gradually sinking for four days, and has now got to a point rarely attained by it. The following are the readings of the Observatory Standard since Thursday, when it began to fall—they are given both as read from the scale, and as corrected for temperatures, capillarity, &c. The hours are very nearly those of daily maximum and minimum :—

4 A.M.			10 A.M.		4 P.M.		10 P.M.	
	Read.	Cor.	Read.	Cor.	Read.	Cor.	Read.	Cor.
Th. 18,	29.736	29.586	29.792	29.633	29.686	29.529	29.722	29.568
F. 19,	678	526	746	594	462	488	710	557
S. 20,	688	538	768	586	632	475	710	555
M. 22,	575	421	630	471	494	338	566	411
Tu. 23,	510	357	572	412	489	331		

“As no tempest has presented itself here, such as these indications would have inclined us to expect, we are led to infer that within the last four days a hurricane has been raging within a few hundred miles of us, the effect of which has only been manifested here on the barometer. The influence of the Madras hurricane last October was very conspicuous, but nothing like this.”

“For the following accounts from Cochin and Tellicherry, we are indebted to the kindness of Capt. Biden, the Master Attendant :—

“*Cochin.*—The Ship *Hero of Malown*, which left these Roads on the 25th ultimo, was wrecked on the 26th or 27th near Alleppee—all the crew with one exception were saved, and they have arrived here this day.

“*Tellicherry.*—During the night of the 31st, two Pattimars were driven on shore a little to the southward of the flag staff, and were soon knocked to pieces by the heavy surf. On the 1st instant, another Pattimar was driven on shore to the Southward of the flag staff, and on the 2d, one was swamped at her anchors and went to pieces—the above wrecks have been caused by a heavy rolling sea.”—*Madras Athenæum*.

12th June.—Ship Julius Cæsar, Wingate, from Aden 18th April, and Mocha 11th May.

Remarks.—Julius Cæsar in latitude $12^{\circ} 51'$ N., longitude $58^{\circ} 28'$ E. experienced a heavy gale of wind from S. E. to W. on the 25th May, which continued till the 29th, in latitude $9^{\circ} 56'$ longitude $66^{\circ} 30'$ E. Lost all our sails, and sprung the head of the main mast.—Saw the Hindostan steam ship pass Mocha on the 7th May.

At Hyderabad, the storm commenced at N. E. veered to N. W. and S. W., and then at N. W. again with a greater fall of rain than had been *known* at this season for many years, upwards of 9 inches in 36 hours. Gale commenced on the 22d, and lasted all the 23d as per letter.

Ship Hyderabad from Bombay.—The *Hyderabad* had bad weather at Mangalore on 21st, 22nd and 23rd, wind N. W. to West, much rain. Barometer fell on 21st to 29.41, rose on 21st.

Another report.—The ship *Hyderabad*, Captain Harrison, was at anchor at Mangalore at noon.

21st May.—Dark gloomy weather, and fresh sea breeze. P. M. N. W., cloudy and rain increasing towards midnight.

22nd May.—To noon fresh breeze (wind not marked.) P. M. strong gales. 9 P. M. heavy gales, hard squalls, and a very heavy sea.

23rd May.—6 A. M. unable to ride longer with safety, weighed at 8 A. M. with *uncertain* weather. 10 anchored again. P. M. fresh W. N. W. gales and cloudy; stood to the S. S. W. and South 111 miles, with heavy weather noon 25th, in latitude $6^{\circ} 57'$, having carried the same W. by N. and W. by S. Monsoon to that parallel.

The following is from Captain NEWBOLD, Assistant Resident at Kurnool, Madras territory.

I am sorry to say, that my efforts to obtain information regarding the storm of the 22d, 23d and 24th of May last have been unavailing, I therefore lose no time in sending you my own observations made at Yelgode, a village at the western base of the Eastern Ghauts, lying between 78° and 79° E. longitude and 15° and 16° N. latitude, sheltered on the East and North by ranges of hills at from 7 and 10

miles distance, sufficiently high, (from 500 to 1500 feet above the plain,) to influence the direction of ordinary aërial currents. These observations only go to note the fact of the storm's influence having been severely felt in this latitude so far inland, its duration, and general direction. I much regret the absence of a Barometer, particularly on this occasion, where the atmospheric depression appears to have been so remarkable, and so extensively and simultaneously felt over the greater part of Peninsular India; the fall of the Barometer having been noted at Calcutta, Madras and Bombay. From what I can glean from my correspondents, I find that its chief fury was experienced between 15° and 19° N. latitude and from 76° to 84° E. longitude.

At Yelgode it was ushered in by two days of cold drizzly weather, the atmosphere was charged with low clouds that came from the Westward and hung in wreaths on the Eastern Ghauts. The Thermometer fell from 99° at 2 P. M. the hottest part of the day to 76° . On the 22d at 8 P. M. it commenced to blow strongly from the N. and N. W., increasing at 9 P. M. to a perfect gale, attended with rain, but no thunder, which continued with little intermission during the whole of the night. The next morning, at 10 A. M. a lull took place of an hour's duration. At 11 A. M. it recommenced, rain and wind unattended by thunder, as fiercely as before, never ceasing till the following morning, the 24th, when the sky cleared. The wind however continued strong from the N. and N. W. during the day. 25th was cloudy, rainy and stormy, strong gusts of wind from the W. In the night it rained heavily with thunder and lightning. 26th settled rain, calm. 27th settled rain, light winds variable. 28th clear in the afternoon, and weather gradually assumed its usual tone. Though the storm's chief force was expended on the Coromandel coast in the latitudes mentioned, yet it was also felt on the Western coast so far South as 11° . Near Telli-cherry between the 21st and 25th of May, about 15 Patimars were wrecked along the coast.

From TELlicherry on the Malabar Coast, I have the following notice with a register of the weather at Cannanore, kindly forwarded by J. W. FRASER, Esq., Collector.

I do myself the pleasure to enclose some atmospheric observations for the month of May last. You may have taken notice from the public

prints, that we had unusual and very heavy weather during the month, and much loss to the native craft on the coast in consequence, and one English ship was lost to the Southward near Cochin. With us the wind was not remarkable, May being always a boisterous month, from the surf and swell rolling in; *the tides* were most remarkably high; the bad weather also set in very early, and not from the usual quarter. I chiefly, however, forward the enclosed to inform you, that such statements are now monthly transmitted to Madras, and that I should think copies could at all times be obtained from the authentic sources should you deem such expedient.

P. S.—Many of the old inhabitants believe the bad weather they for ten days experienced and suffered so much from, not to have been the regular “ Monsoon.”

Your's truly,

Tellicherry, July 12th, 1843.

W. H. FRASER.

Register of Meteorological Observations kept at Cannanore for the Month of May, 1843.

Dates.	10 A. M.				4 P. M.				Self-Registering Thermometer.				Howard's Pluviometer.				Whewell's Anemometer taken at 5 P. M.		Weather and prevailing clouds	
	Barometer.	Dry Therm.	Wet Therm.	Depression of Wet Therm.	Barometer.	Dry Therm.	Wet Therm.	Depression of Wet Therm.	6 A. M.		Dys.	Nigt.		10ths in the scale.	Direction of the winds.					
									Dry Therm.	Wet Therm.		Inches.	Cents.			Inches.	Cents.			
18	29.762	85	81	4	29.688	88	84	4	81	79	2	89.5	77	0	..	..	.5	N. W.	Mornings white extensive cumuli, sun out and hot, calm, P. M. Partially overcast, evening horizon dark and threatening all around, nights, calm but still and close. Morning overcast with dark clouds cool and refreshing airs. P. M. The Monsoon appears setting in, sky wholly overcast with heavy clouds, rain, some thunder and lightning; evening very wet and gloomy. Last night very heavy rain with thunder and lightning and high wind for some hours. The morning universally overcast, and frequent light showers, air cool and damp. Afternoon universally overcast, rainy and squally, night wet and gloomy. Morning universally overcast and frequent light showers, air, cool and damp, P. M. Sun continues invisible, squalls ushered in with thunder and lightning, intervals between showers calm. Morning densely overcast and universally with heavy dark clouds, raining with thunder and lightning, cool. P. M. Weather moderating, sun out, intervals of blue sky; night mild, no wind. Morning fine, occasionally cloudy, sun out, calm. P. M. Sun out blue sky with white cumuli, night, wet and squally no thunder.
19	29.730	87	82	5	29.680	87.5	84	3.5	81	80	1	89	80	0	..	..	.3	ditto,	
20	29.756	85	80	5	29.692	89	83	6	82	79	3	85	78.5	15	..	..	.0	ditto,	
21	29.744	83	80	3	29.650	84	79	5	81	79	2	81.5	78	2.45	..	40	2	4		N. N. E.
22	29.676	81	78	3	29.676	80	77	3	80	77	3	81	77	1.35	..	73	..	.0		ditto,
23	29.686	79	77	2	29.612	81	79	2	77	74	3	84	74	5.95	2	36	..	.3	N. N. E.	
24	29.700	83	81	2	29.624	83	79	4	77	75	2	85	73	.40	..	38	..	.2½	N. W.	
25	29.744	82	80	2	29.682	82.5	80	2.5	78.5	76.5	2	82	76	1.65	..	15	1	.0	Ditto.	

BOMBAY.—*Ship news 4th June 1843.*—Ship *Caroline*, J. Constable Master from sea.

Intelligence.—Cut away main-mast in latitude $19^{\circ} 30'$ N. longitude $70^{\circ} 45'$ W. Vessel struck by a heavy Hurricane, and on her beam-ends for five minutes, until main-mast was cut away. On sounding Pumps, found four feet water in the Hold.

I now arrange in the tabular form the logs of the different vessels at sea and on the coast, so as to show at a glance the progress of the gale, with the state of the weather at the same moment of time, as far as our records extend.

Tabular view of the Storm of the 20th to 23rd May, 1843.

Date.	Name of Place or Ship.	Winds and Weather.	Lat. N.	Long. E.	Barometer.	Simp.	Ther.	Remarks.
Noon 9 May, 1843.	Bussorah Merchant, .	W. by S. and fine, midnight, gale at W. by S.	° ' 5 52	° ' 82 12	29.56*	..	..	On 18th strong monsoon W. N. W. and West.
	Rajasthan,	S. E. by E. brisk breeze, P. M. increasing, N. E. at midnight moderate. . . .	91	88 16	Falling,			
	Coringa Packet,	A. M. Tremendous gale E. by S. Noon shifted to N. W. P. M. Abating,	Trincomal- lee West, .10	..	29.45	..	..	18th, Fine, but Barometer fell from 29.70 to 29.50, midnight 29.40 P. M. rising.
	Teazer,	S. W. to S. S. W. threaten- ing weather.	12 00	18 28½	29.72	8	86	A. M. Hove to; P. M. made sail; at midnight wind S. E.
	Candahar, .. .	Light breeze E. N. E. to E. S. E.	15 26 14 51	83 10 81 28				
	Euphrates, .. .	Fine N. E. by E.	18 05	89 06	..	..	..	18th, Calm and heavy clouds in S. E.—Barometer 29.75
	Julia, .. .	Light S. E. breeze midnight steady S. E. breeze. . . .						
	Champion, .. .	Light breeze from the East- ward and hazy weather.	15 29	..	29.85			
	Isabella Watson, ..	Close and sultry, at Anchor at Covelong. . . . .	..	..	..	29.36	83½	Heavy swell rolling in on the beach.
	Bussorah Merchant, .	Continued heavy gale W. by S. and W. S. W.	7 20	..	29.26	..	..	Barometer at midnight, 29.26, heavy gale.
Noon 20 May, 1843.	Rajasthan,	Hard gale West P. M. W. by S. and W. . . . .	..	..	29.20	..	..	Wind shifted to West at 4 A. M. Bar. fell 0.8 before Noon.
	Coringa Packet,	Moderate till midnight, when heavy gale W. S. W. ....	..	..	29.50	..	..
	Marquis of Hastings, S. W.	Moderate S. by W. to W. S. W.	11 50	95 5				

* Corrected.

Date.	Name of Place or Ship.	Winds and Weather.	Lat. N. ° /	Long. E. ° /	Barometer.	Simp.	Ther.	Remarks.
Noon 20 May, 1843.	Seringapatam,	S. S. W. increasing gale. . .	7 30	88 50	..	..	..	Heavy squalls, thunder and lighting.
	Teazer,	Variable from E. to N. N. E. P. M. N. W. gale. . .	..	..	29.70	..	86	P. M. threatening and increasing to a strong gale N. W. Steering to the Southward.
	Union,	Freshening from N. E. . .	15 1	82 37	..	..	..	Gale increasing from noon to midnight.
	At CORINGA,	A. M. N. E. P. M. Easterly 10 P. M. N. E. fresh breeze. . .	16 51	82 51	..	..	..	Midnight very threatening.
	Candahar,	N. E. P. M. threatening N. E. by East. . .	16 6	82 13	4. P. M. 29.60	..	..	Barometer 1 A. M. 29.72 midnight 29.50.
	Euphrates,	Noon North, P. M. N. E. increasing, . . E. N. E. P. M. increasing. . .	16 2½ 15 42	81 40	..	..	..	Heavy swell from the East saw the land off Narsapore point, At night hard squalls E. and E. N. E.
	Lord Lyndoch,	N. E. by S. to E. N. E. P. M. increasing. . .	..	..	29.85 to 29.75	..	..	7 A. M. arrived in Madras Roads.
	Julia, . .	Noon increasing S. E. by E. squally P. M. E. S. E. and S. E. by E. increasing to a gale.	16 9	88 13	29 75	..	86	
	Champion,	Lightning, squally and suspicious looking weather . . .	16 9	..	..	..	..
	At Madras, . .	Hard squalls N. W. and heavy rain, . .	..	..	..	29	26	
Noon 21 May, 1843.	Isabella Watson,	A. M. Light winds S. S. W. P. M. strong gales W. N. W. . .	13 13	80 26	29.305	..	..
	At ENNORE, . .	A. M. more moderate S. W. P. M. strong gale South. . .	9 30 8 12	..	..	..	..	S. Gale continuing to midnight. Midnight hard gale S. S. W.
	Bussorah Merchant, . .	Fresh gale S. W. . .	..	..	29.70	..	..
	Rajasthan, . .	..	..	..	..	..	..

Dates.	Name of place or Ship.	Winds and Weather.	Lat. N.	Long. E.	Barometer.	Simp.	Ther.	Remarks.
Noon 21 May, 1843.	Tenasserim S. V. ..	Fresh breeze W. N. W. variable P. M. South and S. W.	° ' 6 49	° ' 78 3	4 A. M. { 29.92 { —.75 Noon, { 29.90 { —.72 4 P. M. { 29.90 { —.72	..	..	Midnight brisk gale S. W.
	Coringa Packet, ..	Terrific gale, supposed from West to W. S. W. P. M. Moderating, midnight West fine... Westward and S. Squally, freshening breeze .. S. S. W. Increasing gale .. heavy squalls and gloomy weather.	5 30	83 40	29.40	..	..	Barometer at midnight 29.65.
	Marquis of Hastings, Seringapatam, ..	Wind W. by N. or West, and W. N. W. veering to S. W. Noon hurricane.	9 10	88 50	29.20	..	..	Noon hove to; a complete hurri- cane; Barometer 2 A. M. 29.70 at 6, 29.40, at 8, 29.30, Noon 29.20, 4 P. M. 29.60, midnight 29.45.
	Teazer, .. ..		.. ..	.. ..		..	..	Running to the Southward.
	Union,	Gale increasing North or N. by W. to midnight. .. ..	.. ..	.. ..	.. ..	..	..
	At CORINGA, ..	N. E. heavy squalls through- out.	16 51	82 16		..	..
	Candahar,	N. E. severe gale increasing to midnight.	15 40	82 40	29.55	..	..	Lying to, heavy sea breaking over the ship.
	Euphrates,	A. M. Hard gale E. N. E. Noon N. Easterly P. M. hard gale N. E. 9 P. M. Easter- ly Midnight E. S. E.	14 40	82 52	28.90	28.80	..	[P. M. Simp. 29.80. At the commencement of the gale

Date.	Name of place or Ship.	Winds and Weather.	Lat. N.	Long. E.	Barometer.	Simp.	Ther.	Remarks.
21 May, 1843.	Lord Elphinstone,	N. N. E. to N. E. E. Mid-night strong gale..	15 45	83 15	Noon 20.	..	..	A. M. Barometer falling from 29.98 to 29.55; at 3 P. M. dark gloomy appearance.
	Lord Lyndoch,	N. E. by E. to E. N. E. strong gale,.	..	..	..	..	..	Gale commenced soon after mid-night at N. E. by N.
	Julia, ..	Noon S. E. strong gale, ..	13 50	86 46	29.40	..	86	Barometer 29.50 to 29.48 severe gale with squalls and fog.
	Champion, ..	Strong gale (Easterly?) P. M. drawing to E. S. E. ..	15 31	..	29.70	..	..	Barometer falling.
	At MASULIPATAM, ..	N. E. heavy squalls and rain, ..	16 5	81 11	..	..	..	Barometer falling.
	At PULICAT, ..	Gale commenced about 11 A. M. North and N. W.	13 26	80 26	..	..	..	Barometer falling.
	At MADRAS, ..	At 1.30 P. M. gale N. W.	..	..	..	..	..	7 P. M. wind N. 10 N. N. E.
	Brig Bittern, * ..	ran to sea ..	12 33	82 0	28.48	..	..	Ran to sea from Madras roads at 12.30 P. M. 20th gale increasing to the Eastward. P. M. wind S. S. W. to West.
	Baboo, ..	2 A. M heavy gale W. N. W.	..	..	..	..	..	2 1/2 P. M. Simpiesometer 28.96. 8 P. M. Simpiesometer 28.84. Thermometer 83.
	Isabella Watson, ..	Blowing very hard N. E. ..	..	..	..	29.16	83 1/2	At noon slipped and ran to sea 8.30 P. M. wind shifted to W. N. W.
	General Kydd, ..	N. N. W. blowing fresh. ..	..	..	..	29.45 to 29.11	..	At noon slipped and ran to sea 8.30 P. M. wind shifted to W. N. W.
	At ENNORE, ..	Strong gales N. W. to W. N. W. throughout. ..	..	..	..	..	..	Heavy sea from the Eastward.
	Bussorah Mercant. ,	A. M. finer, gale from South at noon. P. M. South and S. S. E. ....	..	..	..	..	..	Heavy sea from the Eastward.
Noon 22 May, 1843.			12 00	87 24	..	..	..	Monsoon gale, to midnight.

* I have inserted here only a few of the Logs of the vessels which put to sea from Madras Roads; their brief reports mostly affording but few data and agreeing as to the veering of the wind.

Dates.	Name of Place or Ship.	Winds and Weather.	Lat. N.	Long. E.	Barometer.	Simp.	Ther.	Remarks.
Noon 22 May, 1843.	Rajasthan.....	Fresh S. W. monsoon gale..	7 48	91 45	29.60			
	Tenasserim S. V. ..	S. W. brisk gale P. M. W. S. W. and S. W... ..	5 3	80 36	Noon 29.30 — 40 4 P. M. — 80 60			
	Coringa Packet,	Moderate and fine.						
	Marquis of Hastings,	S. W. by W. to S. S. E. squally.	14 52	93 57	..	..	..	Cross sea from S. W.
	Seringapatam, ..	S. W. by S. heavy gales rain thunder and lightning. P. M. wind S. S. W. 5 South. W. N. W. gale. ..	10 0	85 30	..	..	..	Latterly more moderate.
	Teazer.		11 25	85 10	29.60	..	..	From 7 A. M. moderating.
	Union,							
	At CORINGA,	A. M. N. E. 5 P. M. Easter- ly heavy gales and rain throughout. ..	16 51	82 16				
	Candahar, ..	N. E. heavy gale 10 A. M. S. E. 1 P. M. hurricane at S. E. 6 P. M. hurricane at South. ..	15 30	83 00	28.83	..	..	2.30 P. M. Hurricane at the highest, 8 P. M. Barometer 29.29 moderating to midnight.
	Euphrates, ..	5 A. M. hurricane S. E. by S. noon S. S. E. P. M. hur- ricane at South 7 P. M. S. S. W. ..	14 08	82 29	..	..	..	6 P. M. Barometer rising, 8 P. M. Barometer 29.20. Midnight hard gale.
	Lord Elphinstone, ..	Severe gale N. E., E. N. E. and East, 1 P. M. veered from East to E. S. E. and S. E.	15 0	82 26 (?)	29.8 29.0 28.90 28.80	..	..	Noon terrific squalls.

Date.	Name of Place or Ship.	Winds and Weather.	Lat. N.	Long. E.	Barometer.	Simp.	Ther.	Remarks.
Noon 22 May, 1843.	Lord Lyndoch, ..	Noon hurricane about N. E. by E. shifted at 1 P. M. to S. W. .. ..	.. ..	.. ..	.. ..	.. ..	.. ..	Barometer 10 A. M. 28.35 and at $\frac{3}{4}$ past noon 27.95 when hurri- cane veered to S. W. after a calm of $\frac{3}{4}$ of an hour.
	Julia,	S. E. to S. S. E. severe gale P. M. S. E. to S. Midnight South,	o ' 13 47	o ' 86 05	29.45	.. ..	86	Bar. 29.45 to 29.40 at 11 P. M.
	Champion, ..	E. S. E. P. M. hurricane from South, .. ..	.. ..	.. ..	29.60 to 29.20	.. ..	.. ..	P. M. lull, and drawing to S. W. shifted to hurricane at South.
	At MASULIPATAM, ..	5 P. M. gale increasing N. E. and N. N. E. .. ..	.. ..	.. ..	29.08 to 28.76	.. ..	.. ..
	At PULICAT, ..	Gale abating about noon. ..	.. ..	.. ..	.. ..	.. ..	.. ..
	At MADRAS, ..		.. ..	.. ..	.. ..	.. ..	.. ..
	Brig Bittern, ..	5 A. M. wind <i>shifted</i> to West.	12 15	82 51	29.40	.. ..	.. ..	P. M. Wind S. W.
	Isabella Watson, ..	8 A. M. furious gale N. W. ..	.. ..	.. ..	.. ..	.. ..	.. ..	3 A. M. Sympiesometer 28.64, Thermometer 83, Noon Madras by account W. by N. 70, 2 P. M. Sympiesometer 28.70, 3 P. M. 28.84 moderating; wind <i>flew</i> round from N. W. to West and at 4 S. W. moderat- ing to Monsoon gale by 23d. 2 A. M. Wind shifted to S. W. by W. 3.30 was dismasted Noon 68 miles $8\frac{1}{2}$ S. from Madras P. M. moderating.
	General Kydd, ..	Abated. W. N. W. or N. W. ..	.. ..	.. ..	29.18 to 29.27	.. ..	.. ..
	At ENNORE, ..	A. M. N. W. P. M. W. N. W. midnight West and mo- derating .. ..	.. ..	.. ..	29.3	.. ..	.. ..	Strong gales throughout and heavy sea from Eastward.

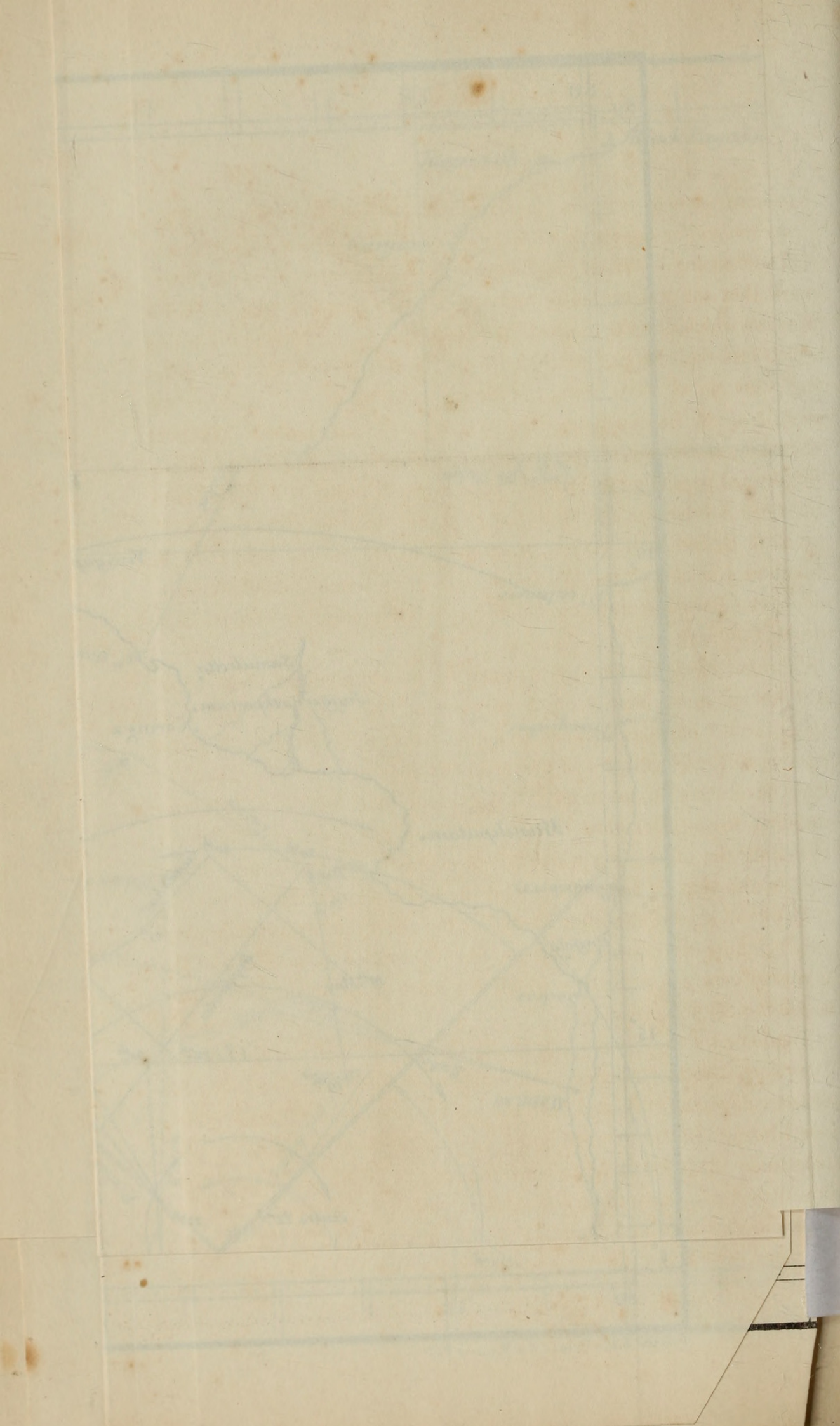
Date.	Name of Place or Ship.	Winds and Weather.	Lat. N.	Long. E.	Barometer.	Simp.	Ther.	Remarks.
Noon 23 May, 1843.	Bussorah Merchant, ..	S. S. W. steady monsoon gale. ..	14 34	86 30				
	Tenasserim S. V. ..	West to S. W. by W. brisk gale. ..	6 49	82 58	4 P. M. { 29.80 — .55			
	Marquis of Hastings, ..	N. W. veering to S. W. monsoon.	16 42	92 4				
	Teazer, ..	About South moderating ..	..	..	29.66	.. ..	86	
	Union, ....	.. ..	11 50	82 30	.. ..	.. ..	..	Vessel founded a little before noon, near this spot.
	At CORINGA, ..	1 A. M. S. E. at 3 Southerly moderating to fine at mid-night. ..	16 51 15 38	82 16 83 20				
	Candahar, ..	Hard gale S. S. W. ...						
	Euphrates, ..	2 A. M. S. S. W. moderating to noon and P. M.	16 17	83 44				
	Lord Elphinstone, ..	5 A. M. Wind South, 8 P. M. moderating at S. S. W. ....	.. ..	.. ..	28.75 29.0 29.5 29.10	.. ..	..	6 Lost the rudder.
	Lord Lyndoch, ..	A. M. moderating to noon, when Wind about S. W. ....	.. ..	.. ..	.. ..	.. ..	..	Moderating to a strong monsoon on 24th latitude 16° 24' N.
	Julia, ..	Noon gale from South P. M. moderating. ..	15 47	85 20	29.40	.. ..	86	Barometer 29.40 to 29.55.
	Champion, ..	Drawing to S. S. W. and abating to noon.	16 0	83 20				
	At MASULIPATAM, ..	2 A. M. wind veering to E. S. E. and then S. and S. by W. blowing violently..	16 5	81 11	28.98 to 29.30			
	At MADRAS, ..	.. ..					
	Brig Bittern, ..	.. ..	11 36	83 25	29.40			
	General Kydd, ..	Monsoon gale. ..	13 47	82 3	29.44			



Chart
TO THE TENTH MEMOIR
on the
Law of Storms
IN INDIA
BEING
The Coast Hurricane
of 21st and 22nd May
1843.
By Henry Piddington.

CEYLON

Andaman Is.



SUMMARY.

I proceed now to consider in detail the evidence afforded by these documents for laying down the track of this storm as I have traced it.

The first log is that of the Bussorah Merchant, which I notice to remark that she was evidently carrying a heavy monsoon from the 19th May, on which day she reached Point de Galle, to the 22nd and 23rd on which last day she had reached $14^{\circ} 34'$ N. longitude $86^{\circ} 30'$ E. steering thus as it were from the South point of Ceylon towards the middle of the Bay on those days, and before the monsoon. The next document is the log of the Rajasthan, which ship being bound to the Southward, was from the 19th at noon, when in latitude $9^{\circ} 1'$ N. longitude $88^{\circ} 16'$ East, standing to the S. S. W. with the wind from S. E. by E. to E. and N. E. At 9 A. M. on the 20th she had the wind at N. E. which at 4 *shifted* to the Westward, and was a strong gale at West by noon, the Barometer having fallen very considerably, the ship running to the Eastward.

The fall of the Barometer is somewhat loosely given as being *about* 80, but it must have been a very remarkable one for those latitudes, and I am thus inclined to suppose that this vessel had a storm passing to the Northward of her at about noon on the 20th, when she may have been in latitude $8^{\circ} 35'$ N. longitude $88^{\circ} 55'$ E. She was standing to the Eastward from 5 to 7 knots per hour, and the storm travelling the other way, which will account for the suddenness of the fall, as also that by noon of the 21st she had the storm moderating.

It was of small extent, for as seen by the chart the Seringapatam was only bringing up a heavy monsoon, about 90 miles to the South of the supposed centre for this day, which was most probably the date of the beginning of the vortex.

Passing over the curious log of the Coringa Packet and that of the Tenasserim, both of which I shall notice in another place, we have next for these days, the 19th, and 20th the log of the transport Teazer, which vessel hove to on the 19th May, *on account of the threatening weather* in latitude 12° N. $81^{\circ} 28'$ E. ; her Barometer at 29.72 and having stood on a little again, hove to on the 20th, on which day at noon I take her to have been about in latitude $11^{\circ} 18'$ N. longitude $82^{\circ} 40'$ E. In the afternoon of this day the storm had commenced with her in a gale from

N. W. and she scudded with it to the E.S.E. We shall return to her log when discussing the place of the centre of the storm for the 21st, but I may remark here, that we can barely suppose the storm of the Rajasthan and that of Teazer to have been the same.

On the 21st, we have the Teazer with a gale from N.W. since the afternoon of the N.W. and at noon on this day, after scudding with a tremendous heavy gale from the Westward, broaching to in a hurricane, with the Barometer at 29.20, and afterwards rising. This must place her position on that day very close to the centre, and that centre about due North of her.

The ships Lord Elphinstone, Lyndoch, Candahar, Champion and Euphrates* were all on this day off the low land at the mouth of the Godavery and Kistnah, and it will be noted that the trending of the coast just to the South of their position, or in latitude 15° North, from N. E. and S. W., becomes North and South, and the high land recommences in about Lat. 15° to the Southward, leaving the valley and delta of the Godavery to form a wide extent of low land. The Euphrates, the outermost of these vessels, was at noon on the 21st about 120 miles from False Point. They had all gales from E. N. E. to N. E. with falling Barometers, and the Julia, which ship was far to the N. Eastward, and about in the middle of the Bay, had the wind at S. E. We shall thus, I conceive, not be far wrong if we consider the centre of the storm at noon on the 21st to have been about in longitude 85° and in latitude $11^{\circ} 20'$. There is perhaps a little anomaly in the wind marked in the log of the Bussorah Merchant, which is said to have been S.W. A. M. and South P. M. which would allow us to call the wind S. W. by S. at noon, while in strictness she should have the wind S. W. by W. or two points farther to the Westward. This is not of any great importance when we recollect that she was bringing up a heavy monsoon, and that the small storm of the Rajasthan on the 20th (if there was one) would necessarily occasion some irregularity hereabouts.

On the other side of the circle also we have some slight anomalies of the same kind, in the winds marked in the logs of the Bittern, Baboo, &c. which were evidently, at this time, in part those deflected from the

* I have marked only the tracks of the Candahar, Euphrates, and Union to avoid confusing the chart with too many of them.

shore and in part the monsoon. For the 22d we have first the logs of the ships off the mouth of the Godavery as before, all of which had had the storm commencing on the 21st at about N. E. and drawing gradually to E. N. E. and E. S. E. according to their positions.

They had it on this day, by noon, a hurricane at S. E. to S. S. E. veering rapidly to South and S. S. W. as it passed them. With the Lord Lyndoch and Champion indeed it was a *shift* of wind, but we have not unfortunately their positions to any accuracy; indeed those positions which are given, though most creditable to the care and attention of the commanders of the ships, must still be taken with much allowance; for, in the position they were, there was not only the usual causes, drift, leeway and heave of the sea operating, but moreover the "storm wave," "storm current" and probably an outset from the floods of the Godavery, all combining to affect the calculated position of the vessels. As however the whole of the ships were, like a dispersed fleet, within a circle of 120 miles in diameter, it will be seen by the chart that in placing the centre for this day at noon in latitude $15^{\circ} 45'$, longitude $82^{\circ} 7'$; we shall as nearly as possible give the ships the winds veering as they really did, as well as to the three stations of Masulipatam and Coringa, at the first and Southermost of which, Masulipatam, the storm was increasing at 5 P. M. of the day from the N. E. and N. N. E. shewing evidently that its track towards the shore was to the South of that port.

On the 23rd we have the storm moderating, with all the ships in the offing, to a regular monsoon gale, and on shore at Masulipatam veering also to the E. S. E. and subsequently to the S. and S. by W. We do not learn where the centre passed inland, as there are no European stations between Masulipatam and Ongole, a distance of 95 miles: it is probable that the centre *landed* somewhere between these two stations. I have carried my strait line near to Ongole, but not meaning thereby to indicate that we have any knowledge of the exact point at which the centre struck the shore. It was I think more to the North, as the storm would probably travel up the valley of the Kistnah.

At Madras and with the ships which put to sea from the roads of that port, the storm was, as it should be, on the Southern quadrants of a circular, one passing to the North East and North of that point, a gale veering from N. N. W. to N. W. and West, and subsiding into the re-



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