GIF NATURAL RADIOCARBON MEASUREMENTS V

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The list given below contains the C¹⁴ dates obtained for only archaeological samples, during 1966 and 1967; for the study of the geologic samples dated during the same period, cf. our previous list Gif-III (Radiocarbon, 1969, v. 11, p. 327-344). The same instruments and techniques have been employed.

Dates were calculated on the basis of a C¹⁴ half-life of 5568 yr and 95% of NBS oxalic acid as a modern standard.

ACKNOWLEDGMENTS

We should like to thank M. Rousseau for routine sample preparation and J. P. Garnier for assistance with electronic equipment.

SAMPLE DESCRIPTIONS

I. FRANCE

A. Southwest France

Gif-394. Saliés-de Béarn, Basses Pyrénées

3210 ± 200

Charcoal from circular hearth, Saliés-de-Béarn (43° 28' N Lat, 0° 55' W Long), Basses Pyrénées; found with potsherds similar to others of sites of Late Bronze Age, in Aquitaine. Coll. by M. Gauthier and subm. 1965 by J. Coupry, Dir. des Antiquités Historiques d'Aquitaine, Bordeaux. Comment: these circular hearths were used for industrial extraction of salt. Result confirms Late Bronze age indicated by pottery.

Gif-395. Saint-Martin de Caralp, Ariège

9150 ± 1000

Bones of fossil reindeer (Rangifer tarandus) in a stalagmitic layer in the Bernard Cave, at Saint-Martin de Caralp (43° N Lat, 1° 32' E Long), Ariège. Coll. and subm. 1965 by J. Bouchud, CNRS, Paris. Comment: extracted collagen was quite short and diluted with "dead" CO² to bring sample to usual counter pressure. Date not acceptable for fossil reindeer which, according to submitter, definitely left France ca. 12,000 B.P. (Bouchud, 1964).

Gif-376. Lectoure, Gers

2150 ± 150

Charcoal from pottery kilns, at Lectoure (43°56' N Lat, 0° 38' E Long), Gers. Some kgms of Roman coins have been found in each one. Coll. by M. Larrieu and subm. 1965 by E. Thellier, Inst. de Physique du
Globe, Paris. Comment: dated from Late Roman period by coins and by average magnetic measurements obtained on the burnt clay of 4 kilns. Either C\textsuperscript{14} date is aberrant or sample is not representative.

\begin{align*}
\text{Gif-322. Bordeaux, Gironde} & \quad 2110 \pm 120 \\
\text{Bordeaux, Gironde} & \quad 160 \text{ B.C.} \\
\text{Wood from piles extracted during foundation diggings in the city of Bordeaux (44° 50' N Lat, 0° 34' W Long), Gironde. Coll. and subm. 1964 by B. Vermeylen, Soc. Archéolog. de Bordeaux. Comment: because of the source of sampling, depth is difficult to determine; but piles were probably under a mosaic level, dated 4th century A.D.; give earlier date than believed for foundation of city, which probably was, at first, a town built on pilings.}
\end{align*}

\begin{align*}
\text{Gif-332. Chassang, Chamboulive, Corrèze} & \quad 460 \pm 100 \\
\text{Chassang, Chamboulive, Corrèze} & \quad \text{A.D. 1490} \\
\text{Charcoal from a souterrain at Chassang, Chamboulive (48° 26' N Lat, 1° 42' E Long), Corrèze. Coll. and subm. 1964 by H. Boudrie, Uzerche, Corrèze. Comment: this kind of building, which is found in different French regions, seems to have been not only a refuge during disturbed times of history, but also a cultural site.}
\end{align*}

\begin{align*}
\text{Gif-392. Faycelles, Lot} & \quad 1420 \pm 120 \\
\text{Faycelles, Lot} & \quad \text{A.D. 530} \\
\text{Human bones from tombs found in barrow at Faycelles (44° 34' N Lat, 1° 59' E Long), Lot. Coll. and subm. 1965 by P. Delbos, Caussade, Tarn et Garonne. Comment: tombs seem to have been sunk in the barrow, which is surely older. Assoc. pottery is very rough and its age could not be appreciated exactly. This necropolis was believed to be from a Pagan, isolated people in the Merovingian age; date agrees with this interpretation.}
\end{align*}

\begin{align*}
\text{Gif-212. Grotte de Saint-Géry, Loze, Tarn et Garonne} & \quad 1060 \pm 120 \\
\text{Grotte de Saint-Géry, Loze, Tarn et Garonne} & \quad \text{A.D. 890} \\
\text{Charcoal of archaeological layer of the Grotte de Saint-Géry (44° 30' N Lat, 1° 35' E Long), Loze, Tarn et Garonne. Coll. 1961 and subm. 1963 by A. Cavaillé, Mus. d'Histoire Nat. de Montauban. Comment: does not agree with archaeological data; construction of a wall through the layer can explain pollution due to the introduction of more recent charcoals. Expected age: la Tène II Iron age.}
\end{align*}

\begin{align*}
\text{Gif-442. Grotte des Cascades, Creissels, Aveyron} & \quad 3270 \pm 150 \\
\text{Grotte des Cascades, Creissels, Aveyron} & \quad \text{1320 B.C.} \\
\text{Charcoal from a Chalcolithic level in the Grotte des Cascades, Creissels, (44° 05' N Lat, 3° 04' E Long), Aveyron. Coll. 1964 by G. Costantini and subm. 1966 by J. Maury, Rodez, Aveyron. Comment: does not agree very satisfactorily with the well-dated Chalcolithic furniture found in site (Costantini, 1965). Expected age: 2000 to 2200 B.C.}
\end{align*}
Grotte de Sargel series, Saint-Romé de Cernon, Aveyron

Gif-444. Grotte I de Sargel, Level VI
Level VI, with transition between Chasseean and early Chalcolithic industries.

Gif-445. Grotte I de Sargel, Level X
Level X, with pure Chasseean Neolithic industry.

Gif-328. Grotte I de Sargel
From Chalcolithic level of Cave I, Sargel. Comment: fits very well with type of pottery assoc.
General Comment: corresponds nicely to expected ages.

Gif-443. Grotte des Salzets, Mostuéjouls, Aveyron
Charcoal from a unique archaeologic level, 30 cm thick, in the Cave of Salzets, Mostuéjouls (44° 13' N Lat, 3° 09' E Long), Aveyron. Coll. 1964 and subm. 1966 by J. Maury. Comment: agrees with geometric microlithic industry and a fauna with a primitive ox-deer found in the cave (Maury and Lacas, 1965). Similar date obtained for Rouffignac considered classic Sauveterrian site.

Gif-446. Grotte de Puechmargues, La Roque-Sainte-Marguerite, Aveyron
Charcoal found under a Chalcolithic ossuary in a Tardenoisian level, Grotte de Puechmargues, La Roque-Sainte-Marguerite (44° 08' N Lat, 3° 13' E Long), Aveyron (Maury and Lacas, 1965). Coll. 1964 and subm. 1966 by J. Maury. Comment: younger date expected because of Neolithic affinities of tools and presence of pottery. Date is reasonable if compared to dates obtained for early Mediterranean Neolithic, ca. 4500 B.C.

Gif-331. Causse de Méjean,
Gorges du Tarn, Lozère
Charcoal from grave in cave of Causse de Méjean, Gorges du Tarn (44° 14' N Lat, 3° 12' E Long), Lozère. Coll. and subm. 1964 by Y. Legoux, Bulles, Oise. Comment: not Neolithic as expected.

Gif-219. Mas Saint-Chely, Lozère
Charcoal from top layer of rectangular dolmen at Mas Saint-Chely (44° 47' N Lat, 3° 15' E Long), Causse Méjean, Lozère. Coll. 1962 and
subm. 1963 by M. Lorblanchet, Montpellier, Hérault. *Comment:* indicates some re-utilization during Early Iron age of this Neolithic monument, frequent episode in this part of France.

**B. South, Southeast, and central France**

**Palaggiu, Sartene series, Corsica**

**Gif-476. Palaggiu, Corsica 1-1965**
From Funeral Chest A of the alignment of menhirs. Inferior level.

**Gif-477. Palaggiu, Corsica 2-1965**
From a burning level, at foot of N alignment of menhirs.
*General Comment:* 1000 yr younger than expected. May not date site.

**Castello d’Alo, Bilia series, Corsica**

**Gif-478. Castello d’Alo, Corsica 3-1965**
From central inferior hearth, in E cultural monument.

**Gif-479. Castello d’Alo, Corsica 4-1965**
From lower burning level, over pavement, in E cultural monument.
*Comment:* dates last ritual utilization of monument.

**Gif-480. Castello d’Alo, Corsica, 5-1965**

**La “Grotte Murée” series, Montpezat, Basses Alpes**

**Gif-139. La “Grotte Murée”, Layer 4**
Lightly sintered at the top. Coll. and subm. by C. H. Lagrand, CNRS, Marseille.
Gif Natural Radiocarbon Measurements V

Gif-157. La “Grotte Murée”, Layer 5
Coll. and subm. 1962 by J. Courtin, CNRS, Marseille.
General Comment: Layer 6 dated at 3960 ± 175 B.P., Gsy-116 (Radiocarbon 1966, v. 8, 74-95). Archaeologic ages: Layer 4, Late Bronze age, Layer 5, Middle Bronze age, and Layer 6, Chalcolithic age. Dates do not agree with supposed stratigraphy: discrepancy cannot be explained by contamination alone.

Gif-303. Grotte de Unang, Mallemont, Vaucluse
Charcoal from bottom of Level 9 of Grotte de Unang, Mallemont (44° 03’ N Lat, 5° 09’ E Long), Vaucluse. Coll. 1963 and subm. 1964 by M. Paccard, Velleron, Vaucluse. Comment: dates this level of Late Cardial Neolithic, according to stratigraphy.

Gramari series, Methamis, Vaucluse

Gif-262. Gramari, Level C3a
Upper level, containing alternated habitation and inundation layers.

Gif-263. Gramari, Level C3b
Middle level.

Gif-264. Gramari, Level C3c
Lower level.
General Comment: with bones of wild horse and bouquetin, and Sauveterrian artifacts. The dates obtained from these samples are younger than expected.

Gif-437. Bridge of Avignon, Vaucluse
A.D. 410
Fragment of wood under foundations of extreme pillar of Saint-Benezet bridge at Avignon (43° 56’ N Lat, 4° 48’ E Long), Vaucluse. Coll. and subm. 1965 by Centre de Travaux d’Avignon Vallabrèques, Avignon, Vaucluse. Comment: as expected, dates famous bridge of Avignon at Gallo-Roman period.

Gif-452. Dolmen des Fades, Pépieux, Aude
A.D. 1130
Charcoal found in Late Neolithic, Fades’ Megalithic tomb, Pépieux (43° 18’ N Lat, 2° 40’ E Long), Aude. Coll. 1965 and subm. 1966 by
J. Guilaine, CNRS, Carcassonne. Comment: this site is known to have been used during Iron Age, Gallo-Roman period, and the Middle Ages. Dates latest reutilization.

7140 ± 350

Gif-453. Grotte de Gardouch, Beaucaire, Aude
Charcoal from sepulchral grotte de Gardouch, Beaucaire (42° 49’ N Lat, 1° 57’ E Long), Aude. Coll. 1965 and subm. 1966 by J. Guilaine. Comment: disagrees with expected Chalcolithic Late Bronze age. Submitter suggests possible utilization of old woods from the “Pinet” peat bog very near site.

3160 ± 200

Gif-483. Le Gaougnas, Cabrespine, Aude
Charcoal from Late Bronze age site of Le Gaougnas, Cabrespine (43° 21’ N Lat, 2° 27’ E Long), Aude. Coll. and subm. 1966 by J. Guilaine. Comment: in good range of dates for beginning of meridional Late Bronze age.

380 ± 120

Gif-253. Cabane Giry, Nissan, Hérault
Charcoals of Kiln II, from La Cabane Giry, Nissan (43° 20’ N Lat, 3° 02’ E Long), Hérault. Coll. 1963 by Abbé Giry and subm. 1964 by E. Thellier. Comment: dated for comparison with magnetic measurements of burnt clay from Kiln I located near Kiln II. Kilns seem uncontemporaneous.

5000 ± 250

Gif-450. Les Beaux-Escanin 2, Eyguières, Bouches du Rhône

3975 ± 200

Gif-451. Beaussement, Chauzon, Ardèche

2130 ± 150

Gif-250. Le Pègue, Drôme
Gif-704. Sainte-Croix-de-Verdon, Basses Alpes 2150 B.C.

Avignon series, Vaucluse
Charcoal from Quartier de la Balance sta., Avignon (43° 56’ N Lat, 4° 48’ E Long), Vaucluse, where a complete stratigraphy was established from Chalcolithic age to present. Coll. and subm. 1966 by J. Courtin.

Gif-705. Quartier de la Balance, Avignon, Level 3 2150 B.C.
Chalcolithic level.

Gif-706. Quartier de la Balance, Avignon, Level 4 1550 B.C.
Under Level 3, same culture as 705.
General Comment: Gif-705 gives correct age for this Late Neolithic level with “campaniform” beakers, but Gif-706 is contaminated.

Gif-203. Roselet, Lac d’Annecy, Savoie A.D. 970

Gif-274. Grotte de Chazelles, Ardèche 780 B.C.
Charcoal from Level 519-536, Layer IV, Area AE50 from Cave of Chazelles (44° 20’ N Lat, 4° 12’ E Long), Ardèche. Coll. and subm. by S. Nikitine, CNRS, Paris. Comment: was expected to date settlement just before population of Late Bronze age, but appears to correspond to last period.

Gif-277. Grotte des Crânes, Gard 3250 B.C.
Charcoal from N passage of Grotte des Crânes (44° 16’ N Lat, 4° 08’ E Long), Gard. Comment: this human ossuary is Neolithic. It was thought to be either of Neolithic or Bronze age.

Gif-441. Plateau de Ronzières, Puy-de-Dôme A.D. 150
Charcoal from ruins of Gallo-Roman building, Plateau de Ronzières, (45° 31’ N Lat, 3° 07’ E Long), Puy de Dôme. Coll. and subm. by G.
Fournier, Fac. des Lettres de Clermont-Ferrand. *Comment:* most ceramics of site belong to Late Gallo-Roman period; appears a little older but may be acceptable.

**Gif-425. Linard, Haute-Vienne, LIN-10 A.D. 1110**

**Gif-426. Sereilhac, Haute Vienne, BAI-10 A.D. 1110**
Charcoal from a Catalan forge, Sereilhac (45° 47’ N Lat, 1° 5’ E Long), Haute-Vienne. Coll. and subm. 1965 by P. Dupuy. *Comment:* no archaeologic data, but certainly medieval.

**Marcilly-sur-Tille series, Côte d’Or**
Charcoal from fortified, walled site of Marcilly-sur-Tille, (47° 31’ N Lat, 0° 30’ E Long), Côte d’Or. Coll. and subm. 1963 by E. Planson, Dijon, Côte d’Or.

**Gif-230. Marcilly-sur-Tille, M/CN A.D. 1140**
In layer containing Neolithic artifacts.

**Gif-231. Marcilly-sur-Tille, M/TP A.D. 1250**
Interior of rampart, in stake hole.

**Gif-232. Marcilly-sur-Tille, M/FS A.D. 1250**
At bottom of trench.

**Gif-233. Marcilly-sur-Tille, M/CB A.D. 1440**
60 cm beneath surface.

**Gif-270. Hauteroche, Côte d’Or**
Charcoal from burnt material of Gallo-Roman villa, 30 cm from surface, at Hauteroche (47° 30’ N Lat, 0° 19’ E Long), Côte d’Or; assoc. with ancient coins of 2nd and 3rd centuries A.D. Coll. and subm. 1962 by J. Joly, Dir. Antiquités Préhistoriques de Bourgogne, Paris. *Comment:* date seems too old and probably implies utilization of older wood.

**G. Northern France**

**Alésia series, Côte d’Or**
Charcoal from cutting in 2 burnt layers separated by gravel beds, stones, and ground at Alésia (47° 31’ N Lat, 4° 14’ E Long), Côte d’Or. Coll. 1962 and subm. 1965 by Abbé Joly.
Gif Natural Radiocarbon Measurements V

Gif-267. Alésia I
1 m depth.

1670 ± 120
A.D. 280

Gif-268. Alésia II
1.80 m depth.

1240 ± 120
A.D. 710

General Comment: level archaeologically undated as no furniture has been found up to the present.

Grotte de la Baume de Gonvillars series, N Jura
Charcoal and carbonized cereals from habitat in Grotte de la Baume de Gonvillars, (47° 33' N Lat, 6° 38' E Long), N Jura. Coll. 1965 and subm. 1966 by P. Petrequin, Lab. Archéol. de Besançon.

Gif-466. Gonvillars, E3V
From Final Bronze II and III level. Comment: following excavation verified an intrusion at this depth of inferior Neolithic levels.

5000 ± 250
3050 B.C.

Gif-467. Gonvillars, E5b
Late Neolithic level. Comment: corresponds to Michelsberg culture in region. Similar results in Switzerland.

3430 ± 200
2480 B.C.

Gif-468. Gonvillars, E6x
Neolithic level. Comment: ceramics with Danubian influence; Late Rössen culture.

5380 ± 250
3430 B.C.

Gif-469. Gonvillars G10-XI b
Middle Neolithic level. Comment: seems too old for this Neolithic culture.

6250 ± 300
4300 B.C.

Gif-360. Tinqueux, Marne

3910 ± 200
1960 B.C.

Gif-720. Videlles, Seine et Oise
4500 ± 60: GrN-4675, 4500 ± 50: GrN-4676 (Radiocarbon, v. 9, 1967, p. 133); old, if compared to ages of other Late Neolithic sites of Seine-Oise-Marne culture, but corresponds in fact to archaic phase of this culture. Layer D, just above Layer E, was dated 2930 ± 250: Gsy-110 (Radiocarbon, v. 8, 1966, p. 132), but it now seems that this level, was contaminated by upper layers.

**Pincevent series, Seine et Marne**

Charcoal from hearths of Magdalenian habitation site of Pincevent (48° 23' N Lat, 2° 53' E Long), Seine et Marne. Coll. and subm. 1964 by A. Leroi-Gourhan and M. Brezillon.

**Gif-349. Pincevent, Y 61, Area 9**

9840 ± 350

7890 B.C.

40 cm depth, under present soil. *Comment*: date is mean of 2 dates: 9900 ± 350 and 9790 ± 350 B.P. obtained with same sample.

**Gif-358. Pincevent, Hearth III, Habitat 1**

12,300 ± 400

10,350 B.C.

*General Comment*: other measurements made by Louvain and Groningen labs on hearths of same site have given: Lv-291: 10,920 B.P.; Lv-292: 11,610 B.P.; Lv-293: 11,310 B.P. (Radiocarbon, 1969, v. 11, p. 108), GrN-4383: 10,760 B.P.

**Gif-327. Bulles, Oise**

>30,000

Charcoal from Merovingian cemetery at Bulles (49° 28' N Lat, 2° 8' 30" S Long), Oise. Coll. and subm. 1964 by Y. Legoux. *Comment*: no significance unless charcoal was found in incinerator where lignite jewelry was burnt?

**Gif-339. Bardouville, Seine Maritime**

A.D. 1480


**Gif-244. La Ferme du Chinchy, Villeneuve-sur-Fère, Aisne**

2830 ± 150

880 B.C.

Charcoal of hearth at 40 cm depth, with so-called “Tardenoisian” industry from la Ferme du Chinchy, Villeneuve-sur-Fère (49° 39' N Lat, 3° 22' E Long), Aisne. Coll. by M. Hinout and subm. 1964 by H. Alimen, CNRS, Bellevue. *Comment*: not compatible with results for “Tardenoisian” at Coincy, 700 m farther: 3260 ± 200 and 4740 ± 350 B.P. (Gif-132 and Gif-133, Radiocarbon, 1966, v. 8, p. 82). Contamination through sands or disturbed site.
Gif-407. Painting from Musée du Louvre

Fragments of cloth from “Greco-Roman” painting. Subm. by M. Hours, Lab. Mus. du Louvre, Paris. Comment: as expected, painting is forgery.

D. Western France

Gif-345. Le Curnic, Guisseney, Finistère, 5510 ± 250

Heath Neo. 64 3560 b.c.


Ploudalmezeau, Ile Carn series, Finistère


Gif-414. Ile Carn B 3 5340 ± 250

3390 b.c.

Central tomb of a megalithic cairn. Comment: result identical to GrN-1968: 3270 b.c. for same site.

Gif-1362. Ile Carn, S Carn 2 5390 ± 150

3440 b.c.

Room in S dolmen. Comment: tomb similar to Gif-414.

Gif-1363. Ile Carn, N Carn 4840 ± 150

2890 b.c.

N room in N dolmen. Comment: had a longer frequentation than Carn B and S Carn 2, as was expected.

Gif-393. Abbey of Landevennec, Finistère A.D. 1500 450 ± 100

Charcoal from hearth on flagstones, found during excavations in the Landevennec abbey foundations (48° 18’ N Lat, 4° 17’ W Long), Finistère. Coll. and subm. 1965 by M. Ricou, CNRS, Paris. Comment: main part of abbey was built between XIth and XIIIth centuries and it was abandoned towards 1790. Corresponds to one of numerous fires which have destroyed this building.

Le Questel series, Concarneau, Finistère

Remains of a Gallo-Roman settlement, probably a praefurnium found in a villa at Le Questel, Concarneau (47° 53’ N Lat, 3° 45’ W Long), Finistère (Sanquer, 1965). Coll. 1964 and subm. 1965 by R. Sanquer, Fac. des Lettres de Brest.
<table>
<thead>
<tr>
<th>Sample</th>
<th>Site</th>
<th>Epoch</th>
<th>Date (±)</th>
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<tr>
<td>Gif-408</td>
<td>Le Questel</td>
<td>Mortar.</td>
<td>3840 ± 200 1890 B.C.</td>
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<tr>
<td>Gif-409</td>
<td>Le Questel</td>
<td>Charcoal.</td>
<td>1580 ± 120 A.D. 370</td>
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<tr>
<td>Gif-716</td>
<td>Moulin de la Rive, Locquirec, Finistère</td>
<td>Charcoal from Iron age habitat in sand hill, Moulin de la Rive, Locquirec (48° 41’ N Lat, 3° 42’ W Long), Finistère. Coll. and subm. by P. R. Giot and C. T. Le Roux. Comment: perhaps 100 yr too young but fits well with La Tène III age of ceramics (Giot, 1968).</td>
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<tr>
<td>Gif-481</td>
<td>Plouégat, Moysan, N Finistère</td>
<td>Charcoal from Iron age souterrain, Plouégat, Moysan, Bellevue (48° 34’ N Lat, 3° 37’ W Long), N Finistère. Coll. and subm. 1966 by P. R. Giot. Comment: a few centuries older than expected; archaeologic material might be dated to 150 or 100 B.C. (Giot et al., 1965).</td>
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Gif Natural Radiocarbon Measurements V

Gif-487. **Plouasme, Le Bourg, Côtes du Nord**  
A.D. 970
Wood found under a Middle Age mound at Plouasme, Le Bourg (53° 76' N Lat, 4° 85' W Long), Côtes du Nord. Coll. and subm. 1966 by M. Monier, Dinan, Côtes du Nord.

Gif-718. **Saint Goueno, Côtes du Nord**  
A.D. 920
Charcoal from a level of fire of the oppidum of Cap Barré de la Parentelaye, Saint-Goueno (48° 14' N Lat, 2° 33' W Long), Côtes du Nord. Coll. and subm. 1966 by C. T. Le Roux, P. R. Giot. Comment: dates this important protohistoric oppidum.

Gif-717. **Guernehué, Monterblanc, Morbihan**  
230 B.C.

Gif-719. **La Grée Basse, Monteneuf, Morbihan**  
900 B.C.
Charcoal from grave incineration at La Grée Basse, Monteneuf (47° 53' N Lat, 2° 12' W Long), Morbihan. Coll. and subm. 1966 by M. Orhan, Ploërmel, Morbihan. Comment: no archaeologic clue to date site.

**Goërem series, Gâvres, Morbihan**

Gif-329. **Goërem I, AW⁶**  
1910 B.C.
Comment: dates Chalcolithic (Bell-Beaker) frequentation of site.

Gif-330. **Goërem II, AW⁴-AW⁶**  
670 B.C.
Comment: indicates Iron age intrusion.

Gif-768. **Goërem III**  
2150 B.C.
In room of grave, under broken pavement. Comment: presence of so-called ceramics of Kerugou.

Gif-769. **Goërem IV**  
1520 B.C.
Upper hearth in room. Comment: hearth in relation with an attempt to penetrate into the sepulchre.
Gif-1148. Goërem IV b
From deepest level of filling of the room, separated from Goërem IV by stones. *Comment:* important layer with "Kerigou" and campaniform ceramics.

Gif-482. Saint-Evarzec, S Finistère
Charcoal from Bronze Age barrow, Saint-Evarzec, Kerhuel (47° 56' N Lat, 4° 02' W Long), S Finistère (Le Roux, 1966). Coll. 1965 and subm. 1966 by G. T. Le Roux. *Comment:* slightly younger date was expected; dates beginning of Middle Bronze age.

Gif-410. Le Boucaud, Préfailles, Loire Atlantique

La Plaine-sur-Mer series, Loire Atlantique

Gif-411. La Frenelle, La Plaine-sur-Mer
(48° 8' N Lat, 2° 13' W Long)

Gif-412. La Tarra, La Plaine-sur-Mer
(47° 10' N Lat, 2° 15' W Long)
*General Comment:* Late Iron age date on archaeologic ground. All salt industry sites of this type found in different regions of Brittany have similar characteristics, *i.e.*, often near the sea, they contain a lot of "augets" often broken, supposedly, while withdrawing salt from mould.

Gif-413. Monzenil, Vendée
Charcoal from salt industry site at Monzenil (49° 29' N Lat, 1° 00' W Long), Vendée. Coll. and subm. 1965 by P. L. Gouletquer.

Semussac series, Charente Maritime
Gif Natural Radiocarbon Measurements V

Gif-474. Semussac, Level 1

4690 ± 250
2740 B.C.

Lowest level, 1.35 m depth. Comment: expected age: ca. 2700 B.C.

Gif-475. Semussac, Level 3

4250 ± 250
2300 B.C.

Upper level. Comment: expected age: ca. 2500 B.C.

La Garenne de Saint-Hippolyte series, Charente Maritime


Gif-313. La Garenne de Saint-Hippolyte, 1964

4790 ± 250
2840 B.C.

Charcoal from hearth at bottom of chamber.

Gif-417. La Garenne de Saint-Hippolyte, 1965

4560 ± 250
2610 B.C.

Patellae from archaeological layer.

General Comment: shows antiquity of this culture in this place with regard to more continental sites.

II. AFRICA

Gif-306. R’Fana, R.F. 1, Tebessa, Bône, Algérie

7450 ± 300
5500 B.C.


Columnata series, Tiaret

Columnata (35° 32’ 30” N Lat, 1° 30’ 55” E Long), Tiaret, in central part of Maghreb, is key site for study of Epipalaeolithic and Capsian ages in N Africa. Charcoal coll. 1962 and subm. 1965 by G. Camps.

Gif-307. Columnata, 100 to 130 cm depth

5250 ± 250
3300 B.C.

Gif-308. Columnata, 160 to 200 cm depth

6850 ± 300
4900 B.C.

Gif-309. Columnata, 200 to 230 cm depth

6340 ± 300
4390 B.C.

General Comment: show passage from Upper Capsian (Gif-308 and Gif-309) to a Neolithic with Capsian and Mediterranean traditions. The 130 to 160 level dated 6800 B.P. by MC-154 (Radiocarbon, 1969, v. 11, p. 126; Camps et al., 1968).
Gif-438. Hassi-Mouilah E 10, Ouargla, Algeria

Charcoal from Neolithic hearth, Hassi Mouilah E 10, Ouargla (32° 00' N Lat, 5° 16' E Long). Coll. and subm. 1965 by M. Trecelle, Ouargla. Comment: agrees very well with other dates obtained for the Neolithic age of Caspian tradition.

Gif-365. Hassi Manda, Algeria

Charcoal from Neolithic site of Capsian tradition at Hassi Manda on the bank of Es-Roui Erg, NW Sahara (29° 15' N Lat, 2° 30' W Long); nondetermined industry; remains of Sudanese fauna. Coll. and subm. 1965 by J. Mateu, CNRS, Paris.

Gif-366. Foum Seida, Algeria


Gif-461. Tipasa, Algeria, TPS 1


Gif-462. Medjez II, Setif, E Algeria, MJ21

Charcoal from ashy level, in a snailery, at Medjez (36° 11' N Lat, 5° 42' E Long), E Algeria. Coll. and subm. 1966 by G. Camps. Comment: industry of this site has been used to define an Upper Capsian facies.

Gif-463. “Bou-Sfer” W Algeria, ESC-1

Charcoal from hearth in ashy archaeologic level, of littoral site of Bou-Sfer (35° 40' N Lat, 1° 10' W Long), W coast of Algeria. Coll. 1960 by G. Vuillemot and subm. 1966 by G. Camps. Comment: site well-known for its Neolithic ceramics; agrees with dates obtained for similar sites in Spain and Italy.

Gif-464. Tamanrasset, Amekni, Hoggar, AMK 1

Charcoal from hearth in upper archaeologic level, 30 to 60 cm depth, in site of Amekni, Tamanrasset (23° 13' N Lat, 5° 13' E Long), Hoggar. Coll. 1965 and subm. 1966 by G. Camps. Comment: assoc. with Neolithic ceramics of Sudan tradition.
Gif-357. Tamanrasset, Hoggar

Charcoal from the Neolithic burial site near Tamanrasset (23° 10' N Lat, 5° 35' E Long), Hoggar. Coll. and subm. 1964 by G. Camps. Comment: found with 2 Negroid skeletons accompanied by rough ceramics and tools. Too young to date site, perhaps dates re-utilization.

Hoggar series


Gif-700. Silet, No. 3 A.D. 1530
Charcoal from a stone-barrow at Silet (23° N Lat, 5° E Long).

Gif-701. Tit, No. 4 A.D. 1300
Piece of cloth from a stone-barrow at Tit (23° N Lat, 5° E Long).

Gif-702. Tit, No. 68 A.D. 1270
Piece of cloth from a stone-barrow, at Tit (23° N Lat, 5° E Long).

Gif-703. Coralès I A.D. 1510
Charcoal from hearth in a sand-hill (36° N Lat, 1° W Long).
General Comment: samples date occupation of the Hoggar during protohistoric period.

Gif-465. Tamanrasset, Abouleg I, Hoggar 2650 B.C.

Gif-375. Amded Oued, W Hoggar 2160 ± 150 210 B.C.
Fragment of elephant-tusk found at surface of Amded Oued 150 km W of Tamanrasset (22° 35' N Lat, 3° 55' E Long). Coll. and subm. 1965 by C. Arambourg. Comment: this result, much younger than expected, is not significant of formation of regs from ancient flow of Amded Oued.
**Ennedi series, Tchad**

In S W Massif de l'Ennedi, at the limit of the Tchad, more than 500 sites with rupestral paintings were counted by 1956-1957 CNRS expedition. The “Pebble culture”, well-known in Tibesti, is absent in these sites; the lithic industry is too poor to characterize different periods of Neolithic age, but, the ceramic industry is very rich and various. Charcoals coll. 1957 and subm. 1965 by Bailloud, CNRS, Paris.

**Gif-351. Ennedi, Delebo, 2-III**

(17° 12' N Lat, 21° 15' E Long), accompanied by wavy line pottery; dates beginning of Neolithic.

**Gif-352. Ennedi, Delebo, 2 II**

(17° 12' N Lat, 21° 15' E Long), ceramics show affinity with Sudanese civilization of Esh Shaheinab.

**Gif-353. Ennedi, Tenebyela**

(17° 30' N Lat, 21° 37' E Long), same archaeologic context as Gif-352. *Comment:* found very near surface: this explains intrusion of recent charcoal into archaeologic layer.

**Gif-354. Ennedi, Cobé V**

(17° 19' N Lat, 21° 40' E Long), ceramics of Hohou type from “Middle Neolithic” rougher and simpler decoration than ceramics of 1st Neolithic age.

*General Comment:* coherent with other dates obtained for Saharian Neolithic.

**Tchad series**

Charcoal from 3 sites from ancient and middle phases of Sao culture in the Tchad. They are 3 of the 200 sites presently known, between 20 and 30 km N Fort-Lamy (12° 10' N Lat, 14° 59' E Long), Tchad, habitation mounds corresponding to remains of ancient villages. Coll. 1963 and subm. 1965 by J. P. Lebeuf, Lab. d’Ethnol. et d’Archéol. Tchadienne, Paris.

**Gif-428. Mdaga, VII, 1.10 m depth**

Modern

330 ± 120

**Gif-429. Mdaga, VII, 1.50 m depth**

A.D. 1620

1980 ± 180

30 B.C.

**Gif-432. Amkoundjo, 0.30 to 0.60 m depth**

1910 ± 180

A.D. 40
### Gif Natural Radiocarbon Measurements V

<table>
<thead>
<tr>
<th>Gif-435.</th>
<th><strong>Amkoundjo, 2.60 m depth</strong></th>
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<tr>
<td></td>
<td>2070 ± 180 120 B.C.</td>
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<tr>
<th>Gif-436.</th>
<th><strong>Mound of Messo, 2 to 2.20 m depth</strong></th>
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<tbody>
<tr>
<td></td>
<td>1010 ± 120 A.D. 940</td>
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<th>Gif-374.</th>
<th><strong>Madaouela, Nigeria</strong></th>
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<tr>
<td></td>
<td>5520 ± 250 3570 B.C.</td>
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### Tiebala series, Mali, W Africa

Charcoal from detritus pit on side of the “Middle Ages” Site F, 3 km N Tiebala (13° 40' 40" N Lat, 5° 24' 20" W Long), Mali. Site F is ancient mound of dwelling in which were found ceramics of unknown kind. Coll. and subm. 1964 by A. Gallay, CNRS, Paris.

<table>
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<tr>
<th>Gif-383.</th>
<th><strong>Tiebala, FII 1, 0.5 m depth</strong></th>
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<tr>
<td></td>
<td>1440 ± 120 A.D. 510</td>
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<th>Gif-384.</th>
<th><strong>Tiebala, FII 2, 1 m depth</strong></th>
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<tr>
<td></td>
<td>1400 ± 120 A.D. 550</td>
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*General Comment*: local traditions mention that site was occupied in 13th century. Dates are important references for establishing absolute chronology by ceramics in W Africa.

### Mirgissa series, Wadi Halfa, Sudan

Charcoal from Egyptian town of Mirgissa (21° 55' N Lat, 31° 20' E Long), dist. of Wadi Halfa, Rep. of Sudan. Mirgissa is 1 of ancient sites of upper valley of Nile which is now submerged, since construction of Aswan dam. Coll. 1963 and subm. 1964 by J. Vercoutter, Fac. des Sci. de Lille.

<table>
<thead>
<tr>
<th>Gif-295.</th>
<th><strong>Mirgissa M.F. 1</strong></th>
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<tr>
<td></td>
<td>2925 ± 180 975 B.C.</td>
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Charcoal at interior of bricks made of dried silt found in fortress of Mirgissa.

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<tr>
<th>Gif-296.</th>
<th><strong>Mirgissa M. VII. 2</strong></th>
</tr>
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<tbody>
<tr>
<td></td>
<td>3780 ± 200 1830 B.C.</td>
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Similar to Gif-295.
Gif-297. Mirgissa, M.I., BT. 1
Charcoal from hearth covered by Eolian sand. 3020 ± 180 1070 b.c.

Gif-185. Majunga, Madagascar

III. OTHER COUNTRIES

Hang Gon, South Viet Nam

Biskupin series, ZNIN, Poland
The ancient town of Biskupin, Znin (52° 51' N Lat, 17° 41' E Long), Poland is considered as the birthplace of the Lusatian civilization; there is an important controversy about the possible Lusatian origin of Slav people. During the Iron age, a fortified town with ramparts 6 m high, 463 m long, was built in Biskupin. After destruction of the city, a new one was built, according to the same general survey. Samples are pieces of wood from ancient city. Subm. by Z. A. Rajewski, Panstwowe Archaeol., Warsaw. 1635 ± 150 A.D. 315

Gif-224. Biskupin, Area 112

Gif-492. Biskupin, fortification
Subm. 1966. 2570 ± 150 620 b.c.

Gif-493. Biskupin, A2 4c, VII
85 cm depth, subm. 1966. 2670 ± 150 720 b.c.
Gif-495. Biskupin, later settlement

*General Comment:* places period of settlement 750 to 550 B.C., during Halstatt C, when it supposedly was of Halstatt D, 550 to 400 B.C. Duration for the 2 settlements, ca. 200 yr, agrees well with archaeologic data.

**Gif-66. Zameček, Slovakia**

Burnt corn from habitat from Late Bronze age A², Zameček, Nitriansky Hrâdec, Slovakia. Coll. and subm. by P. R. Giot. *Comment:* too young.

**Mallia series, Kriti Island**


**Gif-254. Mallia I**

Burnt layer, 1.50 m depth, E zone of town. *Comment:* agrees with assoc. ceramics which indicate that level of occupation is latest before construction of palace of Mallia between 2100 and 1900 B.C.

**Gif-255. Mallia II**

2.10 m depth, Sq. A³, W zone of town. *Comment:* level corresponds to mean Minoan III in chronology of Knossos.

**Gif-256. Mallia III**

1.20 m depth, Sq. A⁴, 4 m from Mallia II. *Comment:* too young.

**Gif-470. Temple of Bêl, Palmyre, Syria**

Bones of animals, 1.20 m depth in a tell, Temple of Bêl, Palmyre (34° 35’ N Lat, 38° 17’ E Long), Syria. Coll. 1965 and subm. 1966 by R. du Mesnil du Buisson, CNRS, Paris. *Comment:* coherent with stratigraphy of tell, which appears to go from 12th century B.C. to 22nd century B.C. Bones from lower levels had no more organic matter and could not be dated.

**Tureng Tepe series, Gorgan, Iran**


**Gif-301. Tureng Tepe 2**

Remains of wooden post which supported roof of house built of raw bricks, House B, 5 m depth. *Comment:* over House B, another level
of destruction with House A, corresponding to Tureng Tepe II B, a civilization similar to Tepe Hisar II B in Mesopotamia. Above House A, a different civilization appears, with construction in pisé, which had commercial relations with Mesopotamia; time of 1st dynasty of Our, ca. 2500 to 2400 B.C.

Gif-302. Tureng Tepe 4
From House F, 6.50 m depth. Comment: one of deepest levels of Tureng Tepe II B. This level is surely older than Tureng Tepe 2. Date is too young.

Gif-485. Tureng Tepe X
From burning level, 3.50 m depth. Comment: corresponds to end of so-called Hissar III B civilization. Archaeologically dated, 4000 B.P.

Suse series, Iran
Ashes mixed with remains of bones from Suse near by Castle of Darius (32° 12' N Lat, 48° 20’ E Long), Iran. Coll. and subm. by M. Ghirschman, Acad. des Inscriptions et Belles Lettres, Paris.

Gif-180. Suse C, No. 1
On Suse Hill, called “Acropolis”, from a habitation level. Supposed to date from end of 4th millennium B.C.

Gif-182. Suse, A-XIII, No. 3, Loc. 152
From excavation in elamite part of town; dated from middle of 2nd millennium B.C. by cuneiform writing tablets.

Gif-183. Suse, A-XIII, No. 4, Loc. 117
A.D. 200
Similar to Gif-182.

Gif-184. Suse, A-XIII, No. 5
Similar to Gif-182.
General Comment: only correct date is Gif-182. Such a disagreement can only be explained by errors of sampling.

Gif-473. Jerusalem
A.D. 1650
Bark and albumn of olive tree from hill dominating Garden of Olives at Jerusalem (31° 47’ N Lat, 35° 14’ W Long). Coll. and subm. 1965 by J. Chabanon. Comment: not so old as was hoped.
Gif Natural Radiocarbon Measurements V

REFERENCES


