ATLAS OF FRAMBOESIA
A nomenclature and Clinical Study of the Skin Lesions
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of the Skin Lesions

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Introduction

The object of this study is to describe, with the aid of photographs, the skin manifestations of framboesia, and to name such conditions.

The reason for the communication is that we feel that the present diverse and confusing descriptions of framboesia (Hackett 9) should be clarified and, as far as possible, accurate descriptions given. This is particularly important at the present time, when the World Health Organization is embarking upon various treponematoses-control programmes; those including framboesia are being carried out in Haiti, Thailand, and Indonesia.

No attempt has been made here to study the histopathology of framboesia; the descriptions given relate to what is seen by the naked eye, and we have avoided the use of a hybrid, clinicopathological nomenclature.

We hope that the clinical descriptions we have given will be of particular use to doctors and nurses in the field, for framboesia is a disease which, in general, is easy to diagnose on clinical grounds alone.

Definitions have been made with reference to Gould's Medical Dictionary (1949). Nomenclature has been kept as far as possible within the bounds of the English language in its present state of development and as used by the teaching hospitals of England, although the term "framboesia", the Frankish aspect of a word of Germanic origin (M. Sandmann, personal communication), has been retained, as the disease appears to be more widely known by this name rather than by "yaws". Further, the use of the word "framboeside" seems a neat way of expressing the various manifestations of the disease; it is also in keeping with the use of the term "syphilide" in syphilis terminology.

Our approach to the question of the time intervals of the various stages of the disease is in line with those of Stannus 12 and T.T. Turner (unpublished communication to WHO); for, although the term "primary" is self-explanatory, the so-called "secondary" and "tertiary" stages are not so clear and fail to explain the co-existence of the different lesions. Further, the early onset of the so-called tertiary lesions, particularly in the older age-groups, within a year or so of the onset of the primary lesions, is confusing, and we feel we cannot accept any arbitrary division, such as suggested by Spittel: 11 that the lesions of the secondary stage appear before three years and those of the tertiary after three years following the primary. In our experience certain framboesides usually appear early and others usually late; but there is no
certainty about this, and we have studied cases in which nearly all the
varieties of framboesoides have commenced their courses within a year
or so, many of them coincident with each other.

We have attempted in this paper to lay some stress on the maturation
and healing stages of the disease, which few authors except Spittel 11 have
attempted to do. We consider that this is important, for a single examina-
tion of a case is like the examination of a single frame of a cinematograph
film: one knows neither the beginning nor the end of the story. So it
is with framboesia, where the disease in the early stages is characterized
by a waxing and waning of successive and yet contemporary crops of
eruptions.

1. Initial Framboesioma

Synonyms:

Primary sore, framboesioma, mother yaw (Spittel 11)
Primary yaw, primary granuloma, mother yaw, framboesioma (Cham-
bers 1)
Mother yaw, maman pian (Fox 9)
Le chancre pianique (Montel 7)
Initial lesion, first yaw (Hackett 4)
Granulomatous initial lesion (Napier 9)
Primary lesion (Rogers & Megaw 9)
Primary lesion, papulo-ulcerous lesion, mama-yaw (Dubois & Berghe 3)
Mother yaw, primary yaw (Mackie et al. 9)
Primary lesion, mother yaw (Manson-Bahr 9)
Primary sore, mother yaw, papilloma (Soetopo 10)
Initial lesion, mother yaw (Turner, unpublished communication)

This commences as an itching papule or collection of papules, or a
raised tiny ulcer. These develop into a granular excrescence which may
take two main forms.

1.1 Typical framboesioma (fig. 1)

This is a granular papilloma, often showing considerable protuberance
from the skin. It is capped with a yellow, honey-like discharge of creamy
consistency, or an exudate looking glazed and opaque like bacon fat,
but yellowish green in colour, or with an inspissated yellow or grey crust.
Removal of the cap reveals raspberry-like granulations which bleed very
easily. The cap soon re-forms.

In the healing stage, the papilloma shrinks and the crust becomes
inspissated, cracks, and eventually falls off to leave an epithelialized sur-
faced, unless secondary infection has taken place or the lesion continues
to progress to chronicity.
1.2 Fungating framboesioma (fig. 2)

In our experience this variety is the commoner. It is an irregular, fungating mass of granulation tissue which bleeds easily and exudes a watery, yellow discharge which forms scabs irregularly over the surface. Sometimes the growth of the mass of the tissue is so exuberant as to resemble an epitheliomatous new growth. In the healing stage shrinkage, inspissated scab-formation, and epithelialization take place as in the typical variety (fig. 3).

2. Initial Framboesial Ulcer (fig. 4)

Synonyms:

Primary sore ... on pre-existing ulcer (Spittel 11)
Primary granular ulcer (Chambers 7)
Ulcerating types of initial lesions (Hackett 4)
Primary ulcerating lesion (Mackie et al. 9)

This is a crateriform lesion with a granular base. It bleeds very easily and exudes a yellowish discharge, which may at times completely cover the granular surfaces of the cavity.

Sometimes framboesial infection may take place in a pre-existing tropical ulcer, but, as a rule, this latter will show a cauliflower-like mass in one sector of the ulcer resembling an initial fungating framboesioma.

Healing takes place by the formation of an inspissated crust and epithelialization from the periphery.

The initial framboesiomata and framboesial ulcers are usually surrounded by a narrow area of erythema and sometimes, in dark-skinned people, by a zone of hypopigmentation.

These ulcers never have an indurated base and are seldom found on the genitalia; they are nearly always single, but occasionally multiple. The two types of initial lesion may last for a few months, but also may persist for years and be present at the same time as later stages of the disease and, occasionally, apparently change their nature to resemble late ulcerative framboesides (fig. 6).

If the duration of the initial lesions has not been long, the site of the lesion is usually denoted by a hypopigmentation which later disappears; if there has been secondary infection, or the duration has been long, or the site was on the face or axilla, then scar-formation results.

3. Papillomatous Framboeside (fig. 5, 7, 8, 10)

Synonyms:

The yaw, daughter yaw, framboesiform nodule (Spittel 11)
Framboesiomata, button yaw (Chambers 7)
Framboesiform eruption (Fox 3)
Les pianomes ou framboesias (Montel?)
Granulomatous papules (Hackett?)
Papillomatous framboeside (Napier?)
Papules ... the real yaws raspberry (Dubois & Berghe?)
Granulomata (Rogers & Megaw?)
Framboesiform lesions (Mackie et al.?)
The yaw (Manson-Bahr?)
Framboesic papilloma (Soetopo19)
Framboesiform granulomas (Turner, unpublished communication)

This is the typical lesion of framboesia: it comes out in crops all over
the body (including the scalp occasionally) and continues to erupt in
the early stages of the disease, as a rule up to two years from the initial infection.
Its development and description are similar to those of the typical initial
framboesioma, except that these framboesides of the later stage sometimes
arise on a large erythematous patch (fig. 11). Sometimes these framboesides
may be so numerous and minute as to resemble the rash of chickenpox.

Healing (unless associated with secondary infection, or a site on the
axilla or on the face) is usually not accompanied by scarring. The site
may be denoted immediately on the disappearance of the framboeside by
a large area of erythema circumscribing a much larger area than the original
base of the lesion (fig. 12, 13) or, more commonly, by a hyperaemic, hyper-
pigmented, or hypopigmented macule which eventually disappears (fig. 14).
Lesions on the face are very common and, if situated periorally (fig. 9),
give rise to a typical grimace.

4. Condylomatous Framboeside (fig. 15)

These are confluent papillomatous framboesides found in the moist
parts of the body, such as the anus (by far the commonest), vagina, perineum, mouth and nose, axillae, and flexures. They resemble the con-
dylomatata of syphillis and bejel.

5. Paronychial Framboeside (fig. 16)

These are papillomatous framboesides due to initial or later infection
of the margin or bed of the nail. They are mentioned specifically only
because of their particular anatomical situation and their tendency to
chronicity.

6. Circinate Framboeside

Synonyms:
Circinate or annular framboeside, ringworm yaws (Spittel11)
Circinate scaling lesions, ringworm yaws (Chambers?)
Ringworm yaws (Fox?)
Pianides cirrhées (Montel 7)
Circinate lesions (Hackett 4)
Ringworm yaws (Manson-Bahr 4)

This framboeside may evolve in two ways:

1. by the confluence of papular framboesides (fig. 17) or papillomatous framboesides (fig. 18) to circumscribe an area of skin; or
2. by a lateral extension of a papillomatous framboeside in both directions, to be likened to a worm growing within the skin (fig. 19).

These framboesides may completely encircle an area of the skin several inches in diameter which is very often erythematous.

We disagree with Spittel 11 who states: “A study of the evolution of this form shows it to be rather a phase of the healing process of the ordinary framboesiform nodule than a lesion sui generis”; on the contrary, we have observed this lesion consistently in its maturation stage rather than in the healing stage.

The appearance of the skin after the healing stage is similar to that described under papillomatous framboeside, section 3.

7. Erythematous Framboeside

Synonyms:
Macula eruption (roseola) (Fox 3)
La roséole pianique (Montel 7)
Rupial lesions (Hackett 4)
Authentic roseola (Dubois & Berghe 9)
Roseolar eruption (Manson-Bahr 4)
Erythema resembling roseola … like in syphilis (Soetopo 10)
Morbilliform lesions (Turner, unpublished communication)

That framboesial rosesolae exist, we do not deny, but we cannot say with certainty that we have ever seen it during our somewhat considerable clinical experience with the disease. One of us (K.R.H.), in West Africa, has seen a roseola rash co-existing with: (a) initial framboesial ulcer; and (b) papillomatous framboeside. Both cases had high fever, joint pains, splenic enlargement, and marked cervical lymph-node enlargement. In neither case was the association of the rash with framboesia sufficiently strong to exclude an acute exanthemata superimposed upon a framboesial infection.

Montel 7 states that he published a photograph (in 1936) of a roseola rash in a small child with “un chancre pianique”, and quotes Degorce as having published a case of “roséole papuleuse” co-existing with a generalized eruption of “pianomes”.

The authors have seen many blotchy erythematous (? roseola) rashes in association with framboesia. They are associated with the maturation or healing stages of many of the lesions.
In the frequent observation of cases over some weeks, areas of erythema several inches in diameter have often proved to be the sites of circinate framboesides, the peripheral confluent framboesiomata of which only partially circumscribe the area (fig. 17, 19), or framboesides which may arise somewhat eccentrically placed within the area (fig. 11).

Of most frequent occurrence are large blotchy erythematous areas denoting the sites of healing or recently healed lesions (fig. 12, 13). We have named these “erythematous framboesides”. Erythematous areas have only infrequently been observed alone. We believe that probably, in such cases, they denote areas in which full maturation of a florid lesion has not taken place. If, however, cases are seen only once and not observed over a period of time, it is probable that many will be believed to be showing true roseola lesions, whereas in fact such lesions are only early or later stages of the more eruptive florid lesions.

We have not observed the late “tertiary erythema” described by Spittel as occurring in the sock area as a “diffuse rose-coloured infiltration covered with small scales somewhat suggestive of leprosy”.

8. Macular Framboeside

**Synonyms:**

Maculae (Spittel

Macular lesions, yaws trash, yaws spots (Chambers

Macular eruption (roseola) (Fox

Pigmented macules with slightly desquamating margins (Hackett

Macules (Napier

Macules ... with desquamation (Dubois & Berghe

Macules with desquamation (Manson-Bahr

Depigmented lesions like pityriasis versicolor (Soetopo

Scaly macules (Turner, unpublished communication)

The macular stage of the disease according to the definition of “macula” may take three forms:

1. The erythematous maturating or healing stage of framboesiomata and associated lesions, which we have named specifically “erythematous framboeside”. This may be confused with the macular roseola rash (fig. 11, 12, 13), or it may be the same (see Fox

2. A hyperaemic, hyperpigmented, or hypopigmented macule denoting the former site of a framboesiomata or associated lesion as described under “framboesiomata”, section 1, or by Spittel (fig. 14).

3. The multiple circular areas about one inch (2.5 cm) in diameter, showing slight desquamation and which may (a) be entirely depigmented; or (b) be depigmented with hyperpigmented peripheral zones (fig. 10, 20).

These latter (under (3)), according to our classification are the macular framboesides. They disappear in the course of a few weeks or months.
9. Papular Framboeside

Synonyms:
Papular framboeside, acuminate papules, nutmeg-grater appearance (Spittel 11)
Follicular papular lesions, yaws pimples, yaws filth (Chambers 1)
Lichenoid type of eruption, keratoid (Fox 9)
Planides lichénoïdes, pianides . . . aspect anséris (Montel 7)
Papules (Hackett 4)
Lichenous rash, papular or papulo-macular eruption (Napier 8)
Papular eruption (Rogers & Megaw 9)
Papules (Dubois & Berghe 5)
Acuminate papules, lichen framboesianus, pian datre (Manson-Bahr 6)
Papules, pian d’atres, lichenoid, eruption rice, granule of Kayser (Soetopo 10)
Small papules (Turner, unpublished communication)

This type of framboesia may be (a) generalized or (b) with a patchy distribution.

The generalized eruption may cover the whole body or only a region, such as the buttocks, where it imparts a lichenoid appearance (fig. 21). The papules never reach any great size and involute and disappear in a few weeks.

The papular framboeside with a patchy distribution consists of acuminate papules, not larger than a pinhead, surmounted by a fine scale which gives the eruption a greyish-white appearance; the papules are grouped together, particularly on the back and arms, in clusters, which appearance gives rise to the name of nutmeg grater or pian d’atres (fig. 23). Both types of papular eruption tend to involute with desquamation.

10. Desquamative Framboeside (fig. 22)

Synonyms:
Furfuraceous desquamation, ashy desquamation (Spittel 11)
Planides furfuracées, pityriasisformes (Montel 7)
Desquamation (Hackett 4)
Furfuraceous desquamation (Napier 8)
Scaly eruption (Rogers & Megaw 9)
Furfuraceous desquamation (Manson-Bahr 6)

This framboeside consists of small or large areas of desquamating skin, the flakes of which have a greyish, ashy, powdery appearance. Often the areas have a collection of papules at the periphery or scattered throughout, so that it is associated with the type we have named papular framboeside.
11. **Plantar (Palmar) Framboeside**

**Synonyms:**
- Plantar framboeside, plantar yaw, crab yaw (Spittel 31)
- Non-ulcerative plantar lesions, running yaws, ulcerative plantar papules, crab yaws, late plantar lesions (Chambers 7)
- Plantar keratosis, crab yaws (Fox 3)
- Desquamations... plantaires en aires circulaires, pianides érythémato et papulo-squameuses palmo-plantaires, pianides plantaires hyperkératosiques et trichophytoïdes (Montel 7)
- Granulomatous plantar, non-granulomatous secondary plantar lesions, tertiary plantar lesions (Hackett 6)
- Plantar yaws, plantar yaws granuloma, crab yaws (Napier 6)
- Crab yaws, palmo-plantary lesions (Dubois & Berghe 3)
- Crab yaws (Mackie et al. 6)
- Foot yaws, crab yaws (Manson-Bahr 6)
- Plantar papilloma, plantar hyperkeratosis (Soetopo 10)
- Plantar papules, plantar hyperkeratosis (Turner, unpublished communication).

The plantar and palmar lesions can be classified under two main headings:

11.1 **Ulcerative plantar framboeside** (fig. 1, 24)

This ulcerative lesion, which takes place in both the palms and the soles but most frequently in the latter, is a framboesioma which has begun in the deeper layers of the skin and has pushed its way towards the surface to form an ulcer. These lesions are among the most painful and disabling manifestations of yaws; when they occur on the sole, the foot is usually inverted and adducted so that the patient walks on the outer border, developing a gait which is likened to a crab—"crab yaws".

The lesions may be single or multiple, and, as well as appearing concurrently with crops of framboesiomata and other framboesides, they tend to relapse years afterwards.

11.2 **Non-ulcerative framboeside**

11.2.1 **Plantar.** This framboeside is protean in its appearance and is due to a patchy hyperkeratosis occurring early or late after the appearance of the primary lesion. The hyperkeratotic skin is shed, leaving pitting or large areas of superficial erosion having a gyrate, worm-eaten appearance (fig. 25). Occasionally these latter desquamated areas have an angry, eczematous appearance.

The hyperkeratotic areas are thicker, drier, and harder than normal, and sometimes they become undermined and crossed by transverse fissures which gape, with inverted edges, so that the entire sole may become loosened or exfoliated (fig. 26).
11.2.2 Palmar. This framboeside is similar to the plantar, but the hyperkeratosi does not take place to such a marked degree. As the epidermis is not so thick as that of the plantar, pigmenary changes are more obvious and the spotted appearance constitutes a marked feature of the condition (fig. 28). The angry eczematosus appearance of recently desquamated areas appears to occur more frequently on the palms than on the soles.

12. Mucosal Framboeside

This framboeside (excluding extensions from a framboesioma at the mucocutaneous border of the mouth) consists of an erythema, a white coloured plaque, or an erosion of the buccal mucous membrane, and is very rarely encountered.

13. Lupoid Framboeside

Synonyms:
Nodular cutaneous framboeside (Spittell 11)
Nodular lesions, spreading, serpiginous ulceration (Chambers 1)
Superficial, spreading tertiary skin lesion (Hackett 4)
Spreading ulcers (Rogers & Megaw 5)
Tertiary tuberculo-ulcerous yaws (Dubois & Berghe 3)
Tubero-ulcerative, papuloulcerative (Soetopo 39)
Destructive lesions of the skin (Turner, unpublished communication)

This is a chronic framboesial infection of the skin characterized by the formation of granulation tissue, which, passing through various phases, terminates by ulceration and atrophy with scar formation. The onset is usually some years after the initial infection.

In one variety of this framboeside, the hypertrophic, the new connective-tissue formation predominates over the destructive process, and markedly raised, thick patches of scar tissue result. Occasionally, the scar formation becomes so exuberant as to give rise to very extensive keloid formation (fig. 27).

In another variety, the serpiginous, (fig. 6, 29, 30, 40) the condition spreads superficially by the formation of nodules and ulcers peripherally, while cicatrization takes place centrally, and in yet another, no ulceration takes place—the non-ulcerative (fig. 32), which gives rise later to areas of hyperpigmented or hypopigmented shining, wrinkled, atrophic skin (fig. 31).

The sequelae of all these types of lupoid framboesides may be very gross deformity, such as contractures leading to joint fixation, and amputation of extremities and elephantiasis, due to constriction of the blood or lymphatic supply respectively (fig. 30, 33).
14. Ulcerative Framboeside

**Synonyms:**
- Gummata, superficial gummatous ulcers (Spittel 11)
- Ulcerative lesions, gummata (Chambers 1)
- Ulcerating gumma (Fox 9)
- Localized indolent tertiary ulceration (Hackett 6)
- Gummata ... ulcerate (Napier 9)
- Ulcerous yaw gums (Dubois & Berghe 8)
- Gummatous nodules, indolent ulcers (Rogers & Megaw 9)
- Gummatous ulceration (Soetopo 10)

This framboeside is a late manifestation of the disease and consists of single or multiple indolent ulcers up to many inches in diameter and which persist for many years (fig. 34, 35).

They commence as nodules in the skin or soft, fluctuating gummata of the subcutaneous tissue (fig. 37) which break down; they may be extensions from gummata of underlying bone and are caused very rarely by the persistence of primary lesions or framboesiomata (fig. 6).

Generally, the edges of the ulcer are sharp and the base is covered with bright red granulations; it is not uncommon, however, to find fungating granulations at the edges and, if the ulcer has been present for some time, cicatrization of the base and the surrounding skin (fig. 36). The latter condition often leads to deformities such as described under lupoid framboesides, section 13.

Healing takes place from the edges and leaves a shiny, atrophic, wrinkled scar with depigmentation.

15. Pigmentary Framboeside

**Synonyms:**
- Leucoderma (Spittel 11)
- Pigmentary changes (Chambers 1)
- Patchy depigmentation ... without preceding ulceration (Hackett 6)
- Disturbances in pigmentation ... tertiary manifestations (Napier 9)
- Dyschromia (spotted, patchy) (Dubois & Berghe 8)

This framboeside is seen most commonly in association with the plantar framboesides; in both types there may be extension, on the dorsum of the extremity involved, of hypopigmentation, at the edge of which there is often a zone of hyperkeratotic hyperpigmentation (fig. 38, 39). In the palmar framboeside multiple areas of hyperpigmentation are often encountered, which give the palms a spotted appearance (fig. 28).

Pigmentary changes are also seen in the atrophic scars following lupoid framboesides (fig. 30, 31).
The pigmentary changes here described are permanent and never react to treatment, whereas the pigmentary changes described in association with framboesiomata, and particularly macular framboesides, react to treatment or disappear in the course of time.

16. Gangosa

**Synonyms:**
- Gummatus infiltration nose and palate (Spittel)
- Gangosa (Chambers 1)
- Gangosa, destructive rhinopharyngitis (Fox 3)
- Gangosa (Hackett 4)
- Gangosa, rhinopharyngitis mutilans (Napier 6)
- Gangosa (Rogers & Megaw 9)
- Gangosa, ulcerated muco-cutaneous lesion (Dubois & Berghe 3)
- Gangosa (Mackie et al. 9)
- Gangosa, destructive ulcerous rhino-pharyngitis (Manson-Bahr 6)
- Rhinopharyngitis mutilans (Soetopo 19)
- Gangosa (Turner, unpublished communication)

This condition is a late manifestation of framboesia and is primarily a lesion of the nasopharyngeal structures leading to perforation of the hard or soft palate and extensive destruction of the nose (fig. 40). It is included here as the condition extends from within outwards to involve the underlying skin secondarily (fig. 41). Sometimes the only external sign of the underlying process is a swollen nodular erosive process of the nasal skin (fig. 42).

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**SUMMARY**

A nomenclature, with definitions and photographs, has been attempted for the clinical skin manifestations of framboesia. The old “primary, secondary, and tertiary” terminology has been discarded, as the time relationships of the various stages of the disease are unknown and these stages show much overlapping.

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**RÉSUMÉ**

L’auteur a tenté d’établir une nomenclature, accompagnée de définitions et d’illustrations, des manifestations cutanées du pian. Il a renoncé à l’ancienne terminologie – pian « primaire, secondaire et tertiaire » – étant donné que les différents stades de la maladie peuvent se chevaucher et que leur durée relative est mal connue.
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ILLUSTRATIONS
Male aged nine years.
Initial lesion on right knee for three months.
Note also papillomatous framboeside of left ankle and plantar framboeside (ulcerative).
FIG. 2. INITIAL FRAMBOESIOMA (FUNGATING)

Male aged seven years.
Initial lesion on right ankle for one month.

FIG. 3. INITIAL FRAMBOESIOMA: HEALING STAGE

Male aged seven years.
Initial lesion on right ankle for three months, also circinate, desquamative, and plantar (ulcerative) framboesides for two months.
FIG. 4. INITIAL FRAMBOESIAL ULCER

Male aged eight years.
Initial lesion on buttock for six weeks.
Framboises elsewhere for one week.

FIG. 5. PAPILLOMATOUS FRAMBOESIDE

Male aged six years.
Initial lesion of one year ago now denoted by scar on right ankle.
Papillomatous framboesides over trunk and limbs, anul condylomatous framboeside, and generalized papular framboeside for nine months.
Female aged 12 years.
Initial framboesia one year ago; still present on right heel.
Framboesia in both axillae and arms for nine months.
Male aged 20 years.
Initial lesion of left leg which has developed into a late ulcerative frambesoid; note also lupoid frambesoid of right leg.
Initial lesion has persisted three years and has now invaded the tibia.
Lupoid frambesoid of leg and face for two years.
Female aged 12 years.
Initial framboesiaoma one year ago; still present on right heel.
Framboesides in both axillae and arms for nine months.
FIG. 8. PAPILLOMATOUS FRAMBOESIDE

Same case as in fig. 7.

FIG. 9. PERIORAL FRAMBOESIDE

Male aged five years.
Scar of initial lesion of two years ago on ankle.
Recent eruption of papillomatous framboeside around mouth.
Male aged four years.
Initial lesion now healed, one year ago.
Papillomatous framboesia for eight months.
Note the macular framboesias on both legs; the framboesia below left knee protrudes more than one inch (2.5 cm).
FIG. 11. PAPILLOMATOUS FRAMBOESIDE
(Showing large area of erythema)

Male aged eight years.
Initial lesion on leg, now healed, two years ago.
Papillomatous and circinate framboeside of face erupted two months ago.
This lesion shows a large blotchy area of erythema with papillomatous framboeside at one edge.
Same case as fig. 11 two weeks later. With the disappearance of the framboeside the area of erythema might be taken for an erythematous framboeside.
Same case as fig. 12 two weeks later.
The appearances are now those of an erythematous framboeside.
Male aged 50 years.
Showing erythematous, hyperpigmented/depigmented maculae denoting site of original lesions.
Scar of initial lesion on left ankle.
Eruption of papillomatous framboesia six months ago.
Note two framboesias above elbow.
Male aged eight years. Initial lesion scar on right ankle one year ago. Generalized papillomatous, and papular framboesial eruption.
Male aged 15 years.
Healed initial lesion of five years ago, on back.
Has had paronychial frambeside of toe for one year.
FIG. 17. CIRCINATE FRAMBOESIDE

Male aged seven years. Initial framboesia on ankle for three months. Has now had circinate, desquamative, and ulcerative plantar lesions for two months. Note large circinate lesion of brow which consists of an erythematous area surrounded by a confluence of papules.
Female aged 12 years.
Initial lesion two months ago, now healed.
Now has papillomatous, circinate, and ulcerative plantar frambesides, duration one month.
Note multiple circinate lesions consisting of confluent papillomatous frambesides.
Male aged 7 years.
Initial lesion unknown.
Multiple circinate lesions consisting of erythematous areas, partially or completely surrounded by framboesomatous raised edges which are extended circumferentially (like worms in the skin).
This is a maturing stage of the lesion.
Same case as in fig. 19.
Note that macules show central depigmentation with peripheral hyperpigmentation.
Similar lesions are found on the arms.
FIG. 21. PAPULAR FRAMBOESIDE (GENERALIZED)

Same case as in fig. 15.

FIG. 22. DESQUAMATIVE FRAMBOESIDE

Same case as in fig. 17.
Note the framboesiomata on neck and arm.
The areas of "ashy" desquamation are often circumscribed by small papules.
Female aged 11 years. Healed scar of initial lesion of one year ago on foot. Perioral frambesioma and grouped collection of acuminate papules on back and arms.
FIG. 24. ULCERATIVE PLANTAR FRAMBOESIDE

Same case as in fig. 17.
This is a case of so-called "crab yaws".
Note initial framboesioma (fungating) on right ankle.

FIG. 25. PLANTAR FRAMBOESIDE (NON-ULCERATIVE)

Female aged 30 years.
Initial lesion as a girl: scar on right knee.
Now has osteitis of both tibiae bones with ulceration of skin, periostitis of both tibiae
with "sabre formation", lupoid framboesiode of legs and chest, and ulcerative
framboesides of legs, indolent ulcers, and gummate.
Picture shows gyrate lesions and pitting on ball of right foot.
FIG. 26. PLANTAR FRAMBOESIDE (NON-ULCERATIVE)

Male aged 26 years.
Note the hyperkeratosis and erosions on both feet.
The right sole shows an area of exfoliation and the left some fissures.

FIG. 27. LUPOID FRAMBOESIDE (KELOID)

Male aged 25 years.
Initial lesion as a boy; lupoid framboeside commenced five years ago on legs, back, chest, and arms. Photograph shows an active lesion in the region of the right axilla and there is marked keloid formation.
Extensive keloids were found on chest, arms, and back but atrophic scars on legs and feet.
Female aged 40 years.
Initial and perioral lesions 20-30 years ago.
Palmar frambesoid commenced three years ago.
Note the relatively slight hyperkeratosis (leathy looking skin especially in thenar area), desquamation, and "spotty" pigmentation.
Female aged 10 years.
Four years ago developed perioral initial lesion.
Two years ago developed perioral framboesias with subsequent scarring.
Nine months ago developed lupoid framboesia of face, legs, and arms together with periarthritis of arm.
All lesions are active.
Note nodules at the periphery of facial lesion.
FIG. 26. LUPOID FRAMBOESIDE

Male aged 18 years.
The lesion is active but very indolent.
Note the amputation, shiny atrophic skin, and pigmentary changes.

FIG. 27. LUPOID FRAMBOESIDE

Female aged 85 years.
This shows the results of lupoid ulceration which is still active over the right tibia.
There is shiny, hyperpigmented, atrophic skin with, here and there, large areas of depigmentation.
Note the deformity of the right ankle and foot and amputation of the toes due to contracture and bony lesions.
Male aged 45 years. Initial lesion as a boy.
Lupoid framboeside of arm, hand, and legs for four years.
Note the associated dactyliitis.
FIG. 33. LUPOID FRAMBOESIDE WITH DEFORMITY

Female aged 45 years.
Healed initial lesion of five years ago.
Has had lupoid framboeside of both legs with resulting contracture, amputation, and deformity for last three years.
Has also osteitis of both tibias.

FIG. 34. ULCERATIVE FRAMBOESIDE

Male aged 15 years.
Initial lesion three years ago, scar on calf; ulcerative framboeside on dorsum of foot involving toe.
Note the fungating granulations at the edge of ulcer which has been present for about one year.
FIG. 35. ULCERATIVE FRAMBOESIDE

Female aged 50 years.
Initial lesion as a child.
Indolent ulceration commenced two years ago with subsequent amputation of finger one year ago.

FIG. 36. ULCERATIVE FRAMBOESIDE

Male aged 14 years (West Africa).
Initial lesion as a child.
Has ulcerative framboesides of arms and legs, perostotitis of radius and ulnar, and sabre tibiae.
Note the indolent ulceration of wrist which is shallow with a cicatrizied base and surrounding skin.
FIG. 37. ULCERATIVE FRAMBOESIDE (WITH GUMMA)

Female aged 30 years.
Same case as in fig. 25.
Female aged 50 years.
Initial lesion 40 years ago.
Scar on knee.
Developed perioral scarring 30 years ago.
Pigment alteration of hands and feet commenced 10 years ago, together with a mild plantar and palmar framboeside.
No evidence of syphilis.

Female aged 50 years.
Initial lesion as a child.
Ulcerative framboeside of the leg for four years.
Also has old osteitis of frontal bones with scarring of skin.
Female aged 12 years.
Initial lesion eight years ago.
Lupoid framboeside commenced on face, legs, and arms three years ago and nose became affected two years ago.
Has palatal ulcerations and sabre tibiae.
Male aged 30 years.
Initial lesion two years ago.
Fremboesiomata, palatal ulceration, and nose lesions commenced one year ago.
Male aged 35 years.
Initial lesion as a boy.
Palatal ulceration for one year.
Note swelling and nodular, erosive lesions of nasal skin secondary to the gangosa.