Abstract:

The contents of ‘Forest Methods’ can be divided into three main sections: the classification of mountain forest terrains, the care and administration of forests and descriptions of different mountain forest types, with eleven articles out of the main 19 articles devoted to mountain forest terrain. ‘Forest Methods’ begins with a discussion of terrain analysis. It divides terrain into steep mountain slope and gentle mountain slope categories and discusses the merits and demerits of surrounding mountain forest conditions including the height differences and relative distance between mountains. The purpose of this is to outline the criteria necessary in order to assess the most appropriate locations for forest planting.

The first main feature of ‘Forest Methods’ relates to the ideal configuration of terrain for the purpose of preserving the essential energy (qi) of the mountain forest or ‘sanqi’. The most important concept outlined therein is that of ‘embraced protection’ (hougo). In ‘Forest Methods’, embraced protection is described as “the condition in which surrounding mountains serve to prevent the loss of mountain forest qi”. This ‘embraced protection’ concept can still be utilized today in bringing about environmental improvements to rural and urban areas by developing techniques that preserve qi through strategic tree planting. Such techniques were applied in early-modern Ryukyu, including roads lined with Ryukyu Pine trees, forested areas of embraced protection strategically planted to surround a village, trees strategically planted to provide embraced protection along stretches of coastline and Fukugi trees strategically planted to surround individual residences.

The second main feature of ‘Forest Methods’ is an emphasis on the importance of preserving qi from the perspective of forest care and maintenance. ‘Forest Methods’ stresses that if trees are cut down or burned down at the most critical place in the forest, known as the ‘gate of embraced protection’ (hougo), where the tips of the ridge-lines of the embraced protection mountains overlap just like the collar of a shirt overlaps when fixed, wind can enter through such man-made gaps and ultimately this will lead to the ruin of the forest. In order to preserve this vital mountain forest qi, ‘Forest Methods’ instructs that thorough maintenance work for the protection of the forest be focused on the gate of embraced protection.

The third main feature of ‘Forest Methods’ is the use of illustrations for the purpose of teaching the reader how to understand different types of mountain forests. The illustrations are of an Itajii (castanopsis sieboldii) forest in the northern part of Okinawa Island. They show forests at progressive stages from the initial growth phase through to maturity and also the impact of human involvement by showing the condition of forests in the aftermath of tree felling. Commentary is provided alongside each illustration.
The contents are divided into three main sections: the The Scope of the Forest Administration Bureau (Yamabugyousho Kimocho) care and maintenance of forests and descriptions of classification of mountain forest terrains (somayama) terrains. The contents of The Secrets of Forestry (Sanrin Shinpi) from 1768. Since these were discussed in detail in the introduction to our translation of 'Eight Writings on Forest Administration' (Rinsei Hassho). 'Forest Methods' is the opening set of provisions in Rinsei Hassho.

The contents of 'Forest Methods' actually overlap to a certain extent with those of 'The Secrets of Forestry' (Sanrin Shinpi) from 1768. Since these were discussed in detail in the introduction to our translation of 'The Secrets of Forestry' in 2009, however, we are omitting any content comparisons herein.

'Forest Methods' has been published in Japanese on several occasions as part of the aforementioned 'Rinsei Hassho'. The following is not a complete list of publications that include 'Forest Methods' but is a full listing of those that were made reference to for the translation herein: 1) 'Rinsei Hassho', Doi Ringaku Shinkokou, 1976, 2) 'Rinsei Hassho' in Sakihama Shuumei's 'Sai On Zenshuu', Honpo Shoseki Kabushiki Kaisha, 1984, 3) 'Okinawa-ken Shinrin Shisatsu Fukumesho', Noushoumushou Sanrinkyoku, 1990, 4) Tatetsu Shunpou, 'Rinsei Hassho', Tokyo Tosho Kabushiki Kaisha, 1937 and 5) 'Rinsei Hassho' in 'Nihon Sangyou Shiryou Taikai, Daisankan: Nouringyou', Chuugai Shoougyou Shimposha, 1926. 

As to the division of responsibilities for this project, the writing of the preface and abstract as well as the translation of the early-modern Japanese souroubun (候文) text of 'Forest Methods' into modern Japanese was conducted by Nakama Yuei, the translation from modern Japanese into English by John Purves, and the digitization of the original text and layout of the current document by Bixia Chen. In terms of language order in this document, the early-modern souroubun text will be followed by the modern Japanese version and then the English translation.

II (檜山見篤之事)

檜山の地形の見方

Aspects of Mountain Forest Terrain

第1項 山之急立候係是基地と申、亦平立候係是嶺地と申候。嶺地、基地勾次第上中下有之候。其見篤圈記之。

第1項

山の斜面が急傾斜な所は基地（ほうち）という。また、山の斜面が緩やかな所は嶺地（れいち）という。嶺地や基地は傾斜度で上、中、下に分けられる。その様子は図1のとおりである。

Article 1

A mountain slope with a steep gradient is called a steep slope (houchi). A mountain slope with a gentle gradient is called a gentle slope (reichi). Both steep and gentle slopes can be separated into high, medium and low grades according to the angle of slope. These conditions are shown in the following illustration (Fig. 1).

第二項 左右高平にて、其間底地之平有之候係、嶺地と申候。亦嶺地之前に向居候高平は、對崎と申候。嶺地之後有之候係は、祖山と申候。左右山之高、同様にして相向候は、相對崎と申候。亦山気之不擾様諸山之相間候を、抱候と申候。亦抱護左右之手先にて、衣裳之領を打合候係に入違候所を抱護之隔申候事。

第2項


2 'Somayama Houshikichou' was translated into English as 'The Wooden Mountains Method Book' and published in the 'Eight Volumes on Ryukyu Forest Administration by Saion (sic)' in 1952. United States Civil Administration of the Ryukyu Islands (USCAR), 'Eight Volumes on Ryukyu Forest Administration by Saion'. Forestry Bureau, Department of Natural Resources, Government of the Ryukyu Islands, 1952.
The flat terrain located between two high mountains is called a valley (kanchi). A high mountain facing a gentle slope is called a facing mountain (taiji). A high mountain located behind a gentle slope is called an ancestral mountain (sozan). Two high mountains facing one another are called mutually facing mountains (aitaiji). The place where the tips of the ridge-lines of the embraced protection mountains overlap, much like the way both parts of a collar (eri) of a shirt overlap when fixed, is called the 'gate of embraced protection' (hougo no toji).

The "qi" is also considered the base element that all things in the universe are made of. This idea of 'sanki' originally came from Feng Shui and is something that possesses 'life information' (or bioinformatics) (seimei jouhou). "qi" is typically defined as 'matter' (busshitsu) and is something that in the mountains. This idea of 'sanki' originally came from Feng Shui, "qi" is typically defined as 'matter' (busshitsu) and energy/qi. "Qi" is also considered the base element that all things in the universe are made of. 3

The flat terrain located between two high mountains is called a valley (kanchi). A high mountain facing a gentle slope is called a facing mountain (taiji). A high mountain located behind a gentle slope is called an ancestral mountain (sozan). Two high mountains facing one another are called mutually facing mountains (aitaiji). The place where the tips of the ridge-lines of the embraced protection mountains overlap, much like the way both parts of a collar (eri) of a shirt overlap when fixed, is called the 'gate of embraced protection' (hougo no toji).

The flat terrain located between two high mountains is called a valley (kanchi). A high mountain facing a gentle slope is called a facing mountain (taiji). A high mountain located behind a gentle slope is called an ancestral mountain (sozan). Two high mountains facing one another are called mutually facing mountains (aitaiji). The place where the tips of the ridge-lines of the embraced protection mountains overlap, much like the way both parts of a collar (eri) of a shirt overlap when fixed, is called the 'gate of embraced protection' (hougo no toji).
Fourth Article

Steep slopes are also ranked high-, medium- and low-grade. A high-grade site is where the embraced protection mountains are high and are closely grouped to the extent that there are no gaps. A medium-grade site is where the embraced protection mountains are closely grouped but there are deficiencies in the embraced protection. A low-grade site is where the qi is not in harmony as a result of the embraced protection mountains being too distant even though they are closely grouped and there are no gaps.

Fifth Article

Valleys are similarly ranked high-, medium- and low-grade. A high-grade site is where the valley area is expansive. A medium-grade site is where a valley is located between two gentle slopes. A low-grade site is where a valley is located between two high steep slopes.

Sixth Article

The first essential step in planning a forest is to select an expansive area of land on a gentle slope. The kind of timber required for the masts of large ships is produced in wide land areas on the best possible grade of gentle slope. It is critically important that this is understood, that Kouyouzan (Cunninghamia lanceolata) and other trees are planted and that these are carefully nurtured so that they will thrive.

Seventh Article

森林の広い所は、たとえ養護や対峙が無くても、樹木はそれなりに生育する。また何れの低い森林の種（その）に続く林地でも、それ相応に樹木は生育する。

**Article 8**

Even in the absence of embraced protection or facing mountains trees can grow well enough on an expanse of gentle slope. Additionally, trees can even grow relatively well in a valley that extends from the foot (suso) of two low gentle slopes.

**Article 9**

Trees grow very well all the way up to the summit of a high gentle slope with embraced protection and facing mountains. However, trees do not grow well in places that are similar to valleys where the foot of the gentle slope is in close proximity to a facing mountain. The suitability of land for forest is determined according to the distance between the gentle slope and facing mountains. Where the gentle slope is high and the facing mountains low, trees grow relatively well on a gentle slope at a point lower than the summit of the facing mountain. However, it is difficult to grow trees on a gentle slope at a point higher than the summit of the facing mountain. The same conditions apply in the case that there is a difference in height at the summit of the gentle slope and embraced protection.

**Article 10**

There are places where a few gentle slopes are found intermingled with steep slopes in an area consisting predominantly of steep slopes. There are also places where steep slopes are found intermingled with gentle slopes in an area consisting predominantly of gentle slopes. It is critically important to be able to distinguish the differences.

**Article 11**

In the case that there is a low mountain located between a gentle slope and facing mountain trees can grow as well there as they would do on a gentle slope. In the case of a low mountain located between two high steep slopes the intended trees will not grow there since the conditions are the same as with a valley. If a low mountain is located in an expansive area between steep slopes these are actually better conditions than with the highest grade of valley.

**Article 12**

In the case that there is a low mountain located between a gentle slope and facing mountain trees can grow as well there as they would do on a gentle slope. In the case of a low mountain located between two high steep slopes the intended trees will not grow there.
気を含み、自然に諸木も高く成長し、山は活気を帯びてくるだろう。抱擁の閉じ口の諸木を伐り開くと、山気が流れ、山奥まで次第に諸木が衰退し、その後に生える小木は高く成長せず、終わりには樹林（やぶや、雑草・雑木などが生えている荒廃した山）に変わっててしまう。そのため抱擁の閉じ口の場所は、できるだけ抱擁の１番外側の閉じ口から、樹木を植え茂らすこと第１に考えるべきである。もし林の散地が少なく、百姓が食糧生産に支障をきたすような場所は、仕方ないので、１番目の抱擁の閉じ口は畑に利用し、２番目の抱擁から保護すること。

記：抱擁の閉じ口の場所で山工（やまく、樹木の伐採・加工）するのはよろしくない。

Article 12
Trees in forests (somayama) can prosper or decline depending on how well they are cared for. If the embraced protection is effective by being closely grouped and trees are growing well mountain qi is accumulated, meaning that trees will naturally grow taller and the mountain will come to life. If trees are cut down at the mouth of the gate of embraced protection thereby leaving gaps, however, mountain qi will escape and trees located even in the inner part of the forest will gradually wither, resulting in the subsequent generation of young trees not growing as tall and the mountain forest ultimately deteriorating to the extent that it becomes literally a ‘bushy mountain’ (yabuyama). Considering this, it is of paramount importance that trees be planted and grown as densely as possible from the first external mouth of the gate of embraced protection. In an area where agricultural land is scarce and where peasant farmers cannot produce enough food, however, there is no alternative but to use the area at the mouth of the first gate of embraced protection as agricultural land and focus on preserving the forest from the second gate of embraced protection.

Supplementary:
Tree-felling activities (yamaku) should not be carried out at the mouth of the gate of embraced protection.

第13項 作毛之儀は土地之性相相損申事候得共、袖山之儀は土性不相損、形形次第樹材善悪有之事事。依之袖山散地之儀は、題目山形を致吟味候。然共右散地之内山散にして、雖為不相損之所諸木植仮候得共、始ては立伐或成木に成候得共、續々々と山気を含、其次々小木よりは能立延可申候間、山散仮箇之内も明地無之様に可入念事。

第13項 農作物は土地之性質を過ぶが、袖山は土地之性質に関係なく、山形の狀態で樹木の生育之善悪が決まる。そのため袖山の散地については、第１に山形の狀態をよく調べ選定すべきである。しかし、袖山の散地の中で山の散地に適さない所でも、諸木を植え入付ければ、始めは成長が良くもなく曲がった木に使っていたも、次第に山気を含んで、その後、生育する幼木などは、よう成長するようになる。そのため袖山の散地に深い込まれた所は、空地がないように、樹木を植え付けておくべきである。

Article 13
For agricultural crops the quality of the soil is the primary determinant, but in the case of forests the relative merits and demerits of terrain condition is the preeminent factor, regardless of soil quality. Consequently, in terms of forest sites any decision on a location must be based on careful examination of terrain conditions. However, if trees are planted in a forest site that is located in an unsuitable area based on its terrain conditions, while the first generation of trees might be gnarled or may not grow out straight as the forest gradually accumulates mountain qi subsequent

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 nakama Yuei (仲間勇裁), 梶山政策と戦略、しまたて、40 号、平成 19 年 1 月。
generations of young trees will come to grow and grow well. With this in mind, tree planting ought to be carried out in forest sites that are enclosed and open spaces avoided at all costs.

The four geographical points of southeast, northwest, northeast and southwest, this is an area gripped by the four diseases. Trees will not grow in that kind of place. If deficiencies in the embraced protection can be rectified in one of these geographical directions however, the damage caused by disease can be reduced to some degree. When choosing the location of a forest site close attention should be paid to this point.

In the case of mountain forests within which trees from large to small are uniformly superior in quality it is necessary that we be fully acquainted with the early signs of positive tree growth. Likewise, in the case of mountain forests in which trees from large to small are inferior in quality it is necessary that we be vigilant for the early signs of forest decline.

Supplementary:
When carrying out forest work it is important to keep a careful eye out for good quality growth, even with small trees.

In terms of the distance and height conditions of embraced protection and facing mountains it is necessary to carefully assess these for oneself based on one’s own way of thinking. This is because these conditions are very difficult to adequately express in words. By physically viewing multiple forest sites while bearing in mind the contents of this document thus far one will naturally come to understand them. This is a very important point.

The Care and Maintenance of Forests

In the case of mountain forests within which trees from large to small are uniformly superior in quality it is necessary that we be fully acquainted with the early signs of positive tree growth. Likewise, in the case of mountain forests in which trees from large to small are inferior in quality it is necessary that we be vigilant for the early signs of forest decline.
As previously mentioned with regard to the method of assessing mountain forest sites, the embraced protection conditions are of great significance. Above all, the gate of embraced protection and that dense growth is achieved in this area earlier than in other places. Moreover, at such time when peasant farmers find trees that might otherwise damage neighboring trees, they can make improvements and avoid cutting these. They can then focus on the trees that do not meet the primary criteria and from among these measure and cut down trees of the appropriate size for their timber requirements. Consonant with this principle, when cutting tree branches care should be taken by forest workers that no harm comes to neighboring trees. Moreover, at such time when peasant farmers find themselves without agricultural tools they should enter the forest in groups of 4 to 5 or 7 to 8 people to carry out important forest care work. They can make improvements by cutting and removing gnarled trees and branches or fallen trees that might otherwise damage neighboring trees.

Article 18
Weeds are often removed from agricultural land, and when carried out properly this is an important factor in the good growth of grains. This basic principle is identical in the case of forests. However, the logic of this is not well understood, from local officials such as district administrators (sabakuri) and village heads all the way down to the peasant farmers who are asked to provide labor in the forests. As a result of this, trees do not grow and forests are falling into decline. In principle serving the same purpose as the removal of weeds from agricultural land, a few appropriate steps for the effective caring of forests are as follows. Firstly, when workers enter the forest they should identify trees of superior quality that are considered most likely to grow well and avoid cutting these. They can then focus on the trees that do not meet the primary criteria and from among these measure and cut down trees of the appropriate size for their timber requirements. Consonant with this principle, when cutting tree branches care should be taken by forest workers that no harm comes to neighboring trees. Moreover, at such time when peasant farmers find themselves without agricultural tools they should enter the forest in groups of 4 to 5 or 7 to 8 people to carry out important forest care work. They can make improvements by cutting and removing gnarled trees and branches or fallen trees that might otherwise damage neighboring trees. When two trees are so close that they are in contact with each other it is important to be able to determine whether one of the trees needs to be cut down or whether both should be left just as they are. Branches hanging over the top of young trees must be cut and removed immediately. With a sound understanding of the ideas laid out above, and if the appropriate effort is made, young trees will

9 山工は『沖縄大百科事典』では「やまこうにん」としているが、ここでは地方土俗名に従って「やまくにん」と呼ぶことにする。山工人は、樹木を伐採して、目的とする木材に加工する技術者である。According to the Okinawa Encyclopedia, the word for 'forest worker' (山工人) is read 'yamakounin' but in this current article the traditional local pronunciation of 'yamakunin' is used. A yamakunin is a forest technician who cuts down trees that will be processed for use as lumber.

10 Sabakuri (理) is the name of a district (magiri)-level administrator.
If government-administered forests are cared for as laid out above it is possible for one person to look after 700-800 trees in one day or ten people look after 7,000-8,000 trees in a day. If each village is involved in this way, good timber can be accumulated in every forest and the result of this will be that regardless of the amount of tree felling forests will not fall into decline. On the contrary, tree felling to a certain extent may be a positive factor in forest care. In the past, as a consequence of there being no understanding of the rules for judging forest sites or the proper way of felling trees, gates of embraced protection were burned down and opened up, the local people neglected the care of the forest and selfishly cut trees down. As a result, the growth of young trees was stunted, the number of gnarled trees increased, and each rank of forest dropped in quality, from high-grade forest to medium-grade forest, from medium-grade forest to low-grade, and low-grade forest became bush mountain, respectively. It is a very foolish situation that we allowed to occur, with forests dropping in quality from those of earlier times and forest workers relocating to far flung places, putting all their time and effort doing forest work there. However, if we remain attentive from now on, carry out forest work in accordance with the proper methods of forest care and administration (sanpou), young trees will grow, trees will grow even on bushy mountains (yabuyama) and forest work will become easier. This, of course, means that peasant farmers will be able to carry out the work. The quality of forests in the Kunigami and Nakagami districts are now inferior to those of earlier times and this is attributable to the fact that the proper forest methods are not well understood. This inescapable fact must be carefully considered.

IV 远山樹木見様之事
山の林相の見方
Understanding Types of Mountain Forest

Article 19
第20項 図のように樹木の梢が隣って林立している山は、若い山と判断すべきである。

Article 20
As shown in this illustration, a forest where the tree tops are growing in unison in this way should be judged a young forest.

第21項 右図之様に相見得候山は樹木程来相模盛初之
山と可心得候事。

第22項 図のように見える山は、樹木が均一に揃った初期成長の山と判断すべきである。

Article 21
A forest that appears as in this illustration where the trees grow evenly and uniformly should be judged a forest in the initial growth stage.

第23項 右図之様相見得候山は盛生相究候山と可心得
候事。

第24項 図のように竹の枯れ枝のように、所々に木の白い枝が見える山は、利用可能な木は残ってはいるけれども、大木は多く切り取られた山と判断すべきである。

Article 23
Within a forest in which trees have reached their maximum growth stage but where gaps are clearly visible in places, as shown in this illustration, the judgment must be that these gaps show a forest in which trees have been cut down.

第25項 右通竹之枯枝之様に所々木白枝相見得候山は能木諸残り候得共大木多伐取候山と可心得候事。

第26項 右図之様相成候山は能木稀有之衰山と可心得候事。

Article 24
As shown in this illustration, within a forest in which white branches can be seen in places, like dead bamboo branches, although perfectly usable timber still remains this should be judged as a forest in which a significant number of large trees have been cut down.
第25項 図のように木の白い枝が半分を占め、曲がったり垂れ下がった枝の状態になっている山は、利用可能な木は稀にしかなく、養えた山と判断すべきである。

Article 25
As shown in this illustration, a forest in which the condition is that the majority of the tree branches are white, gnarled or sagging and where good usable trees are rarely found must be judged as a forest in the process of declining.

第26項 図のように枯れた大树や枯れ木などが、その他の樹木の上に飛び出して見えていれば、かなり衰退した山と判断すべきである。

Article 26
If large withered branches or withered trees can be seen protruding out above other trees in the forest, as shown in the illustration, this should be judged a forest in significant decline.

第27項 図のように木の枝葉が茂り、雑草・雑木で覆われているように見える山は、薬山（荒廃した山）と判断すべきである。

Article 27
As shown in the illustration, where there is dense tree foliage and the mountain appears to be covered in scrub brush and weeds, this is a forest that has fallen entirely into ruin.

第28項 図のように木の梢の中心が曲がり、四方に枝が広がっているならば、その木はそれ以上に伸びない木と判断すべきである。

以上のことに従って、しっかり職務を遂行すべきである。

Article 28
As shown in the illustration, if the tree’s branches spread out in the four directions and the treetop is gnarled, this tree should be judged as one that is no longer growing.

In accordance with everything outlined above, forest work must be carried out properly.

乾隆二年丁巳三月
March, the 2nd year of the Kenriyuu [Ch’en-lung] (乾隆二年) Era [1737]

1737年3月 (旧暦)
March, 1737 (Chinese lunar calendar)

評定所
Hyoujousho

識名親方 Shikina Ueekata
具志頭親方 Gushichan Ueekata (Sai On)
伊江親方 Ie Ueekata

11 The Hyoujousho (Uinauza in Ryukyuan) in the case of Ryukyu was the highest decision-making body of the Royal Government at Shuri. Members of this ‘Council of State’ included the Chancellor (sessen 稽政) and Three-Member Council (sanskihan 三司官). Just below the Sessen and Sanshikan in rank were the so-called ‘Fifteen Officials’ (omote juugonin 表十五人) that consisted of the heads and deputies of the seven main departments within the two main branches of government that were the Board of Finance (Monobugyousho 物奉行所) and the Board of General Affairs (Moushikuchihou 申口方).
北谷王子 Chatan Ooji

山奉行
Forest Administration Bureau

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要約

この「沖繩法式帳」の内容構成は、沖繩の地形の見方、沖
山の保育・管理の仕方、山の林相の見方の3部から成るが、
全19項目のうちの11項目は、沖繩の地形解析に当てられて
いる。まず山の地形を大きく、斜面から側斜面に分け、そ
の地形を取り囲む山の状態（山の高低差や遠近）の良否を論
じている。その目的は、植林するときの適地を判断する基準
を示すことにある。

その特徴の第1は、山の気を保全するための地形の配置
を論じている点にある。その中で重要な概念として提示され
ているのが、保謹の考え方である。「沖繩法式帳」では、「山
気が揺れないように、山々が取り囲んでいる状態」のことを保
謹と規定しているが、この規定はさらに都市や農村の環境整
備に応用されて、植林による気の保全の技術へと発展してい
く。近世琉球における街道沿いの琉球杉並木、集落を囲む
村保謹の林帯、海岸沿いの保謹の林帯、フグギの屋敷林な
どは、その応用事例である。

この法式帳の第2の特徴は、沖繩の管理の面での気の保
全の重要性を論じている点である。保謹の山々が重なって
る稜線の先端が、衣装の桝を重ね合わせような所を、伐採
したり、焼き明けたりすると、そこから風が吹き込み、終いには
山が荒廃してしまう、とこの法式帳では説明する。山の気を保
全するためには、保謹の閉じ口の森林の保全管理を徹底し
て行うよう指示している。

この法式帳の第3の特徴は、山の林相の見方を図で示し
ている点である。その図は沖繩本島北部のイタジイの森をイ
メージして書かれているが、成長の初期段階から成熟した森、
さらに人間によって抜き切りされた状態の森林などについて、
それぞれ図で示しながら解説している。