

2300™

AURORE SOURCEBOOK

Nobody said it would be easy. On Aurore, life is no paradise. There are the quakes and volcanoes, the inedible (and often hostile) life forms, and the peculiar orbital mechanics which made half the planet too hot for human habitation. Even to grow food is a struggle of sizable dimensions. The Kafer invasion only made things more complicated...

Aurore is one of the least hospitable worlds in the French Arm, and at the same time one of the most spectacularly beautiful worlds in known human space. Aurore is a world Earthlike enough that humans can live and work in its temperate zone without being forced to resort to cumbersome survival gear or protective suits. Only slightly smaller than Earth, Aurore is largely a vast and unexplored wilderness; the regions which have been thoroughly explored and developed around each of Aurore's three human colonies are relatively small, and much of the rest of the surface has been only

superficially surveyed and mapped. The fact that Aurore is actually a large satellite of a supergiant gas giant has created extremes of climate and surface conditions, which present **Traveller: 2300** which present players with unique and interesting problems.

Aurore Sourcebook contains background information on Aurore, allowing the **Traveller: 2300** referee to set campaigns anywhere on the planet. It is intended to give a broad overview of the planetary conditions, terrain, biology, and colonies of Eta Bootis II—known to its inhabitants as Aurore.

Although *Aurore Sourcebook* is intended to be used with *Kafer Dawn*, the module is not needed to complete the information presented in this sourcebook.

Design.....William H. Keith, Jr.
Development....Loren K. Wiseman
Art Direction.....Barbie Pratt
Cover Art.....Steve Venters
Interior Art.....David Deitrick
and Rob Caswell

GDW Game Designers' Workshop
Since 1973
PO Box 1646, Bloomington, IL 61702-1646



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Design..... William H. Keith Jr.
Development and Assistance..... Loren Wiseman
and Frank Chadwick
Art Direction..... Barbie Pratt
Art Assistants..... Laretta Oblinger
and Dana Reischauer
Cover Art..... Steve Venters
Interior Art..... Rob Caswell
and Bryan Gibson
Color Plates..... David Deitrick
Typesetting..... Michelle Sturgeon

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PO Box 1646, Bloomington, Illinois 61702-1646 USA



Introduction

Aurore Sourcebook contains background information for use in **Traveller: 2300** campaigns and adventures. It is not an adventure but gives an overview of the conditions, terrain, biology, and colonies of Eta Bootis IIc, known to inhabitants as Aurore.

Aurore is Earthlike enough that humans can live and work in its temperate zone without resorting to cumbersome survival gear or protective suits. Only slightly smaller than Earth, Aurore is primarily a vast unexplored wilderness; the regions which have been thoroughly explored and developed around each of Aurore's three human colonies are relatively small, much of the surface has only been superficially surveyed and mapped. The fact that Aurore is actually a large satellite of a superjovian gas giant has created extremes of climate and surface conditions which present **Traveller: 2300** player characters with unique and interesting problems. This sourcebook was created to familiarize referees and players with the world—and with the problems characters will face.

Some of this information appears in a different form as background material in *Kafer Dawn*, a **Traveller: 2300** game module set on Aurore. *Aurore Sourcebook* contains more complete information on Aurore, however, allowing the referee to set **Traveller: 2300** campaigns anywhere on the planet. The module *Kafer Dawn* is not needed to complete the information presented here but can complement background material in this sourcebook.

ETA BOOTIS STAR SYSTEM

Coordinates: X -26.8, Y -14.3, Z -10.2

Eta Bootis A, Muphrid Type: G0 IV Mass: 1.75 Sol Luminosity: 6.5 Sol Radius: 2.5 Sol

Eta Bootis B, Rubis Type: M0 V Mass: .48 Sol Luminosity: .04 Sol Radius: .54 Sol

Planetary System: The Eta Bootis System consists of five gas giants all orbiting the system's double primary in its outer zone. Eta Bootis A and B orbit one another with an average separation of 1.425 AUs, with an orbital period of 495 days. The stars are too close together to allow Earthlike worlds to orbit one star or the other, too far apart for an Earthlike world to exist in a habitable zone circling both.

I Hesperus Orbital Radius: 4.5 AU Orbital Period: 6.39 years Mass: .8 Jupiter

II Tithonus Orbital Radius: 5.85 AU Orbital Period: 9.47 years Mass: 5.3 Jupiter

III Laodemon Orbital Radius: 8.19 AU Orbital Period: 15.7 years Mass: 1.6 Jupiter

IV Theia Orbital Radius: 12.28 AU Orbital Period: 28.8 years

Mass: .5 Jupiter

V Astraesus Orbital Radius: 19.66 AU Orbital Period: 58.37 years Mass: .28 Jupiter

An ESA exploratory mission in 2238 surveyed the system and catalogued the planets. Eta Bootis II was immediately noted as a world requiring further study.

Eta Bootis II, Tithonus Mean Orbital Radius: 5.85 AU Orbital Period: 9.47 years Mass: 1.007×10^{31} gms (5.3 × Jupiter or .005 Sol.) Equatorial Diameter: 257,000 km (1.8 × Jupiter) Rotational Period: 5h 32m 12s Surface Temperature: 1120°K Luminosity: .00003 Sol

This largest of the Eta Bootean planets is a small member of that class of objects known as "brown dwarfs." Over five times more massive than Jupiter (Sol V), Tithonus radiates far more heat than it receives from its suns due to gravitational contraction. It is not quite massive enough to trigger the thermonuclear reaction which would allow it to "turn on" and shine as a true star; thus, it is doomed to exist as a sullen, dull-glowing body lying halfway on the hierarchy of cosmic objects between the largest true planets and the smallest true stars.

The heat Tithonus gives off, however, is sufficient to create a narrow habitable zone at a distance of 3.6 planetary diameters. Tithonus' third major satellite lies within the habitable zone and is massive enough to have retained an atmosphere during its early history. That satellite, Eta Bootis IIc, is the world which men know as Aurore.

Eta Bootis IIc, Aurore Mean Orbital Radius: 927,525 km Orbital Period: 2.537 days Rotational Period: 2d 12h 51m 12.96s (2.537 days) Equatorial Diameter: 9450 km Circumference: 29,688.1 km Mass: 2.27×10^{28} gms (.38 Earth) Density: 6.07 gms/cm³ (1.1 Earth) Surface Gravity: 728.6 cm/sec² (.743 G) Escape Velocity: 8.3 kps Axial Inclination: 1° Temperature (Hot Pole): 90°C+ Temperature (Cold Pole): -75°C to -35°C Magnetic Field: 5.5×10^{13} gauss tilted 8° to the pole Atmosphere: Pressure at Sea Level: N₂: 78.58% O₂: 19.34% Ar: 1.23% CO₂: 305 ppm O₃ and SO₂: 10 ppm Other Constituents, including Ne, Kr, and NO₂: 1.5 ppm Tidal Effect: .02 Tithonian Gravitational Field: 129 Sol at 1 AU



Aurore: Background

Referee's Note: This section details the history of the Eta Bootis colonies. While the information in this section will be generally available to the characters, it should be revealed to them only as the successful result of considerable research. Many of these facts, especially those dealing with the Kafer War, have been revealed only very recently and will be available to the characters only through conversations with NPCs, consistent study of newsfax printouts, or personal experience. Characters who have not bothered to spend extra time researching, say, events of the Kafer War, may be exposed to the appropriate information gradually during the course of an adventure as they learn it through contact with NPCs.

For this reason, the referee should not allow the players to read the material in this section but should instead relate it to them bit by bit, at his discretion, and as a result of ongoing role-playing interactions. The referee should, of course, be familiar with the material in this section so that he can maintain consistency in his descriptions of Aurore, the colonists, and the Kafers.

BACKGROUND: HISTORY

First Survey: The first long-term human visitors to the Eta Bootis system were scientists of the French Imperial survey vessel, *Le Chercheur*, on a French-directed, ESA-sponsored mission to chart the systems of the finger of the French Arm beyond Beta Comae.

Earlier explorational visits had noted that Eta Bootis' inner system was barren of planets due to the perturbational effects of the G0 IV star's red dwarf companion and that the system's second planet was a sub-brown dwarf of possible interest for future missions. Data drawn from long-range photographic and spectroscopic surveys had alerted the scientists aboard *Le Chercheur* to the possibility that one of the brown dwarf's satellites might lie within a narrow habitable zone created by the superjovian's own radiated heat. A ship's boat commanded by Capitaine de Corvette Georges Loubet made the perilous approach through the superjovian's radiation belts by executing a transpolar orbital insertion, landing on Eta Bootis IIc near the present site of Lumiere d'Aube on August 24, 2238.

Loubet's expedition remained on the planet for 18 days, visiting four different sites and transmitting the survey reports to *Le Chercheur* by laser. While attempting to land at a fifth site, the landing boat was destroyed by the arrival of an unexpectedly high tidal surge, and Loubet and his entire command were lost.

First Colony: In 2240, on the return of *Le Chercheur* to Earth,

data from the survey were disseminated among ESA member states. The Ukraine, though not a member nation, had close political and scientific treaty ties with the European Space Agency and was intensely interested in establishing an out-world colony. In 2241, in exchange for promised development royalties, the Ukraine received an ESA charter to exploit the commercial potential of Eta Bootis IIc. Three years later a Ukrainian colonial expedition headed by Vasily Martos and Polkovnik Yuri Leonovich Kamenskiy arrived in the Eta Bootis system aboard a leased colony transport converted from the aging French bulk freighter *Sans Nom*.

The site chosen for the new colony was a mountainous island continent astride the equator in the eastern hemisphere which offered some shelter from the world's fierce storms. World, continent, and colony all were named "Novoa Kiyev."

Second Colony: Promises of rapid commercial exploitation of Novoa Kiyev's mineral resources proved overoptimistic. The Terran Ukrainian government was unable to expand funding of the colony to meet unanticipated losses of equipment and development costs. In 2245 the French decided to establish a colony of their own in the planet's western hemisphere. The settlement of Port Loubet was established late in 2246.

Though the French colony, too, encountered unexpected difficulties in the economic development of its interests on the planet, French off-world industrial interests and a public spirit of national pride at home combined to funnel money through the Colonial Authority to secure and expand the French base. The settlement of Port Loubet grew to become Aurore, a name which, inevitably, was extended to embrace the entire planet. Since French media and trading corporations had far more visibility on Earth than did the Ukrainian government, the name "Novoa Kiyev" soon was understood to refer to the Ukrainian colony alone.

The name "Aurore" provided the mythological basis for naming the other planets of the system. In particular, Aurore's gas giant primary became "Tithonus." In myth, Aurora, the Greek Eos, goddess of the dawn, pleaded with the gods to grant her mortal husband eternal life, forgetting to include in her request a plea for eternal youth as well. The planet, Tithonus, seemed aptly named, sullenly glowing for billions of years, doomed never to achieve the celestial splendor and vigor of a true star. The twin suns of Eta Bootis became, simply, "Notre Soleil" (Our Sun) and "Rubis" (Ruby).

Third Colony: In 2257, a third colony was established south of the tidal fissure called "La Gouffre." Its backers were a

multinational cartel of North American and European corporations interested by survey reports which suggested that large deposits of rhenium and other metals might be present in the area in commercial quantities. The American, Texan, and German colonists had already heard of the difficulties encountered by the French and the Ukrainians in establishing profitable mining operations, however, and with wry humor elected to name their colony "Tanstaaf!"—a very old, popular acronym for "There Ain't No Such Thing As A Free Lunch."

When the cartel broke up the following year, due to the bankruptcy of two of its members, and corporate assets were frozen by the American courts, Tanstaaf! declared its independence and applied to the colonial authorities both of Aurore and of Hochbaden in the neighboring system for favored trade status. Presented with a *fait accompli*, and the possibility of broken relations with Bavaria, the United States of America became the first Terran government to formally recognize the independent colony of Tanstaaf! on February 12, 2258.

Further Growth: In 2280 French expansion of mining outposts and farming settlements south of Aurore/Port Loubet led to the incorporation of a satellite colony called "Lumiere d'Aube" (Light of Dawn). Though still administered through the Auroran Colonial Authority and dependent upon the port facilities at Port Loubet, Lumiere d'Aube was locally considered to be an entity apart from Aurore proper, a community of farming settlements or collectives clustered around the site of a former mining outpost.

Nearly half of the initial investment capital for Novoa Kiyev, Aurore, and Tanstaaf! had been plowed into the construction of a trio of sophisticated power satellites in Eos-synchronous orbits and the microwave rectenna farms and power transmission grids on the surface. Though this investment slowed early economic growth, by 2285 nearly 70 percent of Aurore's industry was powered off the satellite grid, and it was predicted that future growth with this inexhaustible source of cheap power already in place, would boom.

Primarily because of the power grid, all three Auroran Colonies were showing signs of modest economic success by the 2290's. Already rhenium mines opened by Tanstaaf! speculators were judged to be marginally profitable, and all promised higher returns as detailed surveys indicated signs of platinum, iridium, uranium, and vanadium in commercially exploitable quantities and placement among the volcanic Hotback Mountains at the base of the High Desert Plateau. Despite the hardships of life on the Auroran frontier, an influx of immigrants seeking a path to quick riches swelled the world's population to almost three million by 2297.

More immediately vital for the colonists than the heavy metals mines was Auroran agriculture. Native Auroran and Terran life are radically different biochemically; humans cannot survive eating native Auroran food, and Terran crops do not grow in Auroran soil. A limited form of terraforming was employed to make food crops possible. Shiploads of soil from the Ukraine, South France, and the Great Plains were shipped at prodigious expense to Aurore, where it was divided into tiny parcels to be carefully worked into larger quantities of sterilized native soil. An entire ecological chain of certain carefully selected Terran organisms, from nitrogen-fixing bacteria to earthworms, were imported, bred, and introduced to the carefully maintained terrestrial plots.

The process represented a large fraction of the initial cost and effort of establishing a human presence on Aurore, but the colonial farms were self-sufficient by 2264, and viable dirt and Terran organisms were no longer needed. The Tanstaaf! settlement actually reported a food surplus in 2291, though ground-to-orbit transport costs prohibit the export of agricultural products.

The Kafer War: Contact with the alien race known as the Kafers was first made in 2295 by French scientists aboard a deep space research outpost at Arcturus, though attempts at establishing communication with them evidently failed. All contact with the outpost was lost in 2297, and merchant and military vessels entering the Arcturus system were attacked. Imperial French and Ukrainian naval squadrons were dispatched to the Eta Bootis system as a precaution.

The precaution was tragically well-founded. On April 4, 2298, a large alien invasion squadron entered Eta Bootean space from the general direction of Arcturus and attacked the human fleet under the joint command of Contre-Admiral Paul Armand DuBoise and Kontr-Admiral Sergei Sergeivich Borodin. In three days of savage fighting, the human fleet was broken by superior enemy numbers. Eight Terran ships were destroyed, including the Imperial French flagship *Ste. Jeanne d'Arc*.

The survivors were reorganized under Borodin's command at Hochbaden, some four light-years farther up-arm. Reinforcements, including Imperial French, Ukrainian, and German squadrons, arrived at Hochbaden to bolster the human fleet, and plans were drawn for a return to Eta Bootis.

Meanwhile, enemy ships invested every off-world outpost and station remaining in the Eta Bootis system. Heedless of the dangers presented by the Tithonian Van Allen belts, alien vessels approached Aurore and destroyed the planet's three eos-stationary power satellites and all other orbital facilities. Close orbit was infested with alien warcraft, and surface installations were attacked from space on April 8. The landings began two days later.

Fighting was severe at first and bitter, brutal, and desperate at the last. All three human colonies clung to their central facilities, mines, and farmland, but most outlying settlements were overrun and destroyed. The defenders' militia was bolstered by a unit of German Marines stranded by the departure of their squadron.

For almost three months, the Combined Fleet at Hochbaden did nothing but draw fire from Earth's news media for its inaction. At last, however, a powerful German naval squadron arrived from Earth. Franco-German relations were still difficult in the aftermath of the War of German Reunification which had ended five years before, but it was recognized that this alien threat—the "Arcturian Menace" as the media had it—was a far greater danger than mere international rivalries. The squadron's commander, Kommodore Wilhelm Lutke, was directed to rendezvous with the Combined Fleet at Hochbaden and cooperate with Imperial French forces "in the face of the present crisis."

In fact, he took de facto command, chivying French and Ukrainian officers and officials until the Combined Fleet was under way towards Eta Bootean space. The Kafer armada, already bloodied by the first Battle of Eta Bootis and now scattered throughout the system, seemed unable to organize a coherent defense. Fears that alien reinforcements had arrived during the intervening three months proved groundless, and the isolated and individual Kafer squadrons were systematically hunted down and destroyed. Human ships returned to close orbit, ground forces were landing to relieve the colonial defenders by July 3, and the remnants of the Kafer fleet had abandoned the system within five days after that.

That was not the end of the fighting, however. In many ways, it was only the beginning.

The Kafers, unable to overrun the principal human strongholds, had established numerous bases in the Auroran wilderness. From these bases they continued to strike at human settlements, outposts, and convoys with (if possible) increased viciousness and savagery.

As human relief forces pressed the Kafers back, it was discovered

that the populations of areas overrun by the invaders had been brutalized to a degree unthinkable even to a species with so bloody a past as humanity. Whole communities had been annihilated; homes, hospitals, entire villages had been razed; whole families had been slaughtered. It was estimated that over 300,000 people, most of them civilians, had died in three months. On a world with a relatively small population to begin with, nearly everyone had lost loved ones and friends.

Less personal, perhaps, but even more threatening to the survival of the colonies than human casualties has been the disruption of Auroran industry and agriculture. The Kafers destroyed everything they could in the areas which they controlled before they were driven out. Everything from factories and mine workings to roads and private vehicles was blown up, burned, or damaged. The three orbital power satellites, together with their ground-based rectenna arrays and transmission grids, had been destroyed. This was a particularly severe blow to all three colonies, who had invested heavily in the satellite power system rather than in less expensive but less promising technologies and had been counting on it for present industrial power and for future development. Finally, wildly virulent fungal agents were deliberately introduced to human croplands, apparently in an effort to wipe out the human population by starvation. The outcome of this particular attack is still in the balance; fungal blights in crops and particularly nasty skin and lung diseases in humans and animals have been spreading slowly, and all efforts to combat them have so far been unsuccessful.

The effects of the war on the Auroran economy have been catastrophic.

As a result of this intensely bitter assault, Auroran colonists set out to prove that the Kafers were not alone in the single-minded bloodthirstiness with which they waged war. Early orders to capture Kafers for study and interrogation were ignored, and officers finally stopped even trying to enforce them. Kafers never surrendered—never—and the human troops, the colonial militias especially, rarely attempted to capture them. A few Kafers incapacitated in combat and taken by human units were later found to have been “shot while trying to escape.” Dried Kafer heads became popular trophies which were mounted on vehicles or fence posts, and many communities paid bounties of Lv20 or more for Kafer shells, the horny carapaces covering their backs.

A few—a very few—humans who were captured by the Kafers early in the invasion, apparently for study and for the purpose of learning human languages for interrogations, managed to escape or were rescued. These people, those who were able to discuss their experiences at all, have provided humanity with its only glimpse of Kafer behavior, culture, and society. Kafer society is reportedly tightly regimented and militaristic. Individual Kafers appear stupid, short-tempered, combative, and cruel, though they maintain a technology which in many ways is superior to that of humans. For this reason there is speculation that Kafers are part of a kind of telepathic hive mentality. Humans who have conversed with Kafers and survived to tell about it report that they refer to us with a term which translates as “meat being.” Since the earliest humans to contact the Kafers were Bavarians, a few Kafers now speak German (none have yet been discovered to speak English or French).

It seems there can be no quarter with this race which has attacked mankind without provocation and is waging war against us with an unheard of and single-minded bitterness. The Auroran colonists have dedicated themselves to the complete extermination of every Kafer on their world, answering bitterness with bitterness and blood with blood.